					DEPARTMEN <sup>*</sup>	T OF NA	OF UTAH TURAL RESO GAS AND M				AMENI	FO DED REPOR	RM 3	
		AF	PLICATION	FOR I	PERMIT TO DRILL					1. WELL NAME and N		2-3G1CS		
2. TYPE O	F WORK	DRILL NEW WELL	REENTE	ER P&A	A WELL DEEPEN	I WELL [	)			3. FIELD OR WILDCA	<b>r</b> Natural	. BUTTES		
4. TYPE O	F WELL				ed Methane Well: NO		~			5. UNIT or COMMUNI		AGREEM	ENT NAM	1E
6. NAME O	F OPERATOR				AS ONSHORE, L.P.					7. OPERATOR PHONE				
8. ADDRE	SS OF OPERAT				<u> </u>					9. OPERATOR E-MAIL				
	AL LEASE NUM		P.O. BOX 1737		enver, CO, 80217  11. MINERAL OWNERS	SHIP				12. SURFACE OWNER		anadarko		
		UTU-01191A			FEDERAL INI	DIAN 🛑	) STATE (	) FEE(		-	DIAN \Bigg	STATE	~	EE 💮
		OWNER (if box 12								14. SURFACE OWNER		`	·	
15. ADDR	ESS OF SURFA	CE OWNER (if box	12 = 'fee')							16. SURFACE OWNER	R E-MAIL	(if box 12	= 'fee')	
	N ALLOTTEE OI = 'INDIAN')	R TRIBE NAME			18. INTEND TO COMM MULTIPLE FORMATIO		PRODUCTION	NFROM		19. SLANT				
(	,				YES (Submit C	Comming	gling Applicati	ion) NO 🤅		VERTICAL DIF	RECTION	AL D	IORIZON	TAL 🔵
20. LOC	TION OF WELL			FO	OTAGES	QT	FR-QTR	SECT	ION	TOWNSHIP	R	ANGE	МЕ	RIDIAN
LOCATIO	N AT SURFACE		21	53 FN	L 2105 FEL		SWNE	3		10.0 S	2:	2.0 E		S
Top of U	ppermost Prod	ucing Zone	19	03 FN	L 1821 FEL		SWNE	3		10.0 S	2:	2.0 E		S
At Total			19	03 FN	L 1821 FEL		SWNE	3		10.0 S	2:	2.0 E		S
21. COUN	TY	UINTAH			22. DISTANCE TO NEA		EASE LINE (F 13	eet)		23. NUMBER OF ACRI	13		IT	
					25. DISTANCE TO NEA (Applied For Drilling	or Comp		POOL		26. PROPOSED DEPTI		TVD: 870	7	
27. ELEV	TION - GROUN	<b>D LEVEL</b> 4986			28. BOND NUMBER	WYBO	000291			29. SOURCE OF DRIL WATER RIGHTS APPR		MBER IF A	PPLICAB	LE
					Hole, Casing			rmation						
String	Hole Size	Casing Size	Length		ight Grade & Th		Max Mu			Cement		Sacks	Yield	Weight
Surf	11	8.625	0 - 2260	28	3.0 J-55 LT	&C	0.2	2		Type V Class G		180 270	1.15	15.8 15.8
Prod	7.875	4.5	0 - 8737	11	1.6 I-80 LT	&C	12.	5	Pren	nium Lite High Strer	ngth	290	3.38	12.0
										50/50 Poz		1200	1.31	14.3
					А	TTACH	IMENTS							
	VER	IFY THE FOLLO	WING ARE A	TTAC	HED IN ACCORDAN	NCE WIT	TH THE UTA	AH OIL AN	ID GAS	CONSERVATION G	ENERA	L RULES		
<b>w</b> w	ELL PLAT OR M	AP PREPARED BY	LICENSED SUR	VEYOF	R OR ENGINEER		<b>№</b> сом	IPLETE DRII	LLING PI	LAN				
AF	FIDAVIT OF STA	TUS OF SURFACE	OWNER AGREI	EMEN	Γ (IF FEE SURFACE)		FORM	/ 5. IF OPER	RATOR I	S OTHER THAN THE LE	EASE OW	NER		
<b>I</b> ✓ DIF	RECTIONAL SUI	RVEY PLAN (IF DIR	ECTIONALLY (	R HO	RIZONTALLY DRILLED	<b>)</b> )	торо	OGRAPHICA	L MAP					
NAME Gi	na Becker				TITLE Regulatory Analy	/st II			PHON	<b>E</b> 720 929-6086				
SIGNATU	RE				<b>DATE</b> 07/06/2012				EMAIL	. gina.becker@anadark	o.com			
	BER ASSIGNED 047529070	0000			APPROVAL				Bro	oceill				
									Perm	nit Manager				

NBU 1022-3G Pad Drilling Program
1 of 7

## Kerr-McGee Oil & Gas Onshore. L.P.

NBU 1022-3G1CS

Surface: 2153 FNL / 2105 FEL SWNE BHL: 1903 FNL / 1821 FEL SWNE

Section 3 T10S R22E

Uintah County, Utah Mineral Lease: UTU-01191A

#### **ONSHORE ORDER NO. 1**

#### **DRILLING PROGRAM**

## 1. & 2. <u>Estimated Tops of Important Geologic Markers</u>: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta Green River Birds Nest Mahogany Wasatch Mesaverde Sego TVD	0 - Surface 1,057' 1,322' 1,807' 4,177' 6,518' 8,707'	Water Water Gas Gas Gas
TD	8,737'	

## 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

#### 4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

## 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

## 6. <u>Evaluation Program</u>:

Please refer to the attached Drilling Program

NBU 1022-3G Pad Drilling Program 2 of 7

## 7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8707' TVD, approximately equals 5,572 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,645 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

## 8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

## 9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

## **Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

NBU 1022-3G Pad Drilling Program
3 of 7

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

## Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### **Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

### Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

NBU 1022-3G Pad Drilling Program
4 of 7

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

#### Conclusion

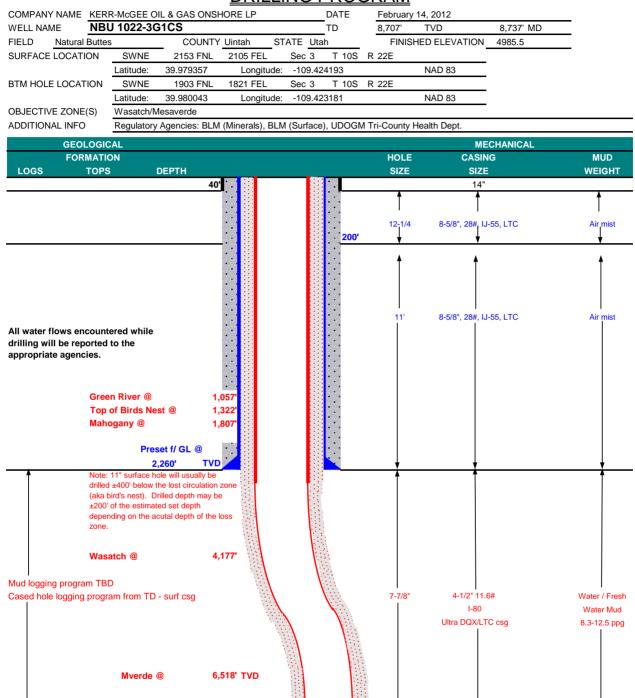
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

## 10. <u>Other Information:</u>

Please refer to the attached Drilling Program.



## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM



8,707' TVD

8.707' TVD

8,737' MD

Sego @

TD @

Max anticipated

12.5 ppg

Mud required

RECEIVED: July 06, 2012



## **KERR-McGEE OIL & GAS ONSHORE LP**

#### **DRILLING PROGRAM**

CASING PROGRAM	<u> </u>								DESIGN	FACTORS	
										LTC	DQX
	SIZE	INTE	ERVAL		WT.	GR.	CPLG.	BURST	COLLA	PSE	TENSION
CONDUCTOR	14"	0	-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,260	28.00	IJ-55	LTC	2.39	1.78	6.28	N/A
								7,780	6,350	223,000	267,000
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.12		3.26
	4-1/2"	5,000	to	8,737'	11.60	I-80	LTC	1.11	1.12	6.36	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water	to surface,	option 2 wi	ll be utilized	
Option 2 LEAD	1,760'	65/35 Poz + 6% Gel + 10 pps gilsonite	160	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	3,677'	Premium Lite II +0.25 pps	290	35%	12.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	5,060'	50/50 Poz/G + 10% salt + 2% gel	1,200	35%	14.30	1.31
		+ 0.1% R-3				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

## FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals	Survey	s will be	taken at	1,000'	minimum	intervals
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Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:	
	Nick Spence / Danny Showers / Chad Loesel

DRILLING SUPERINTENDENT:

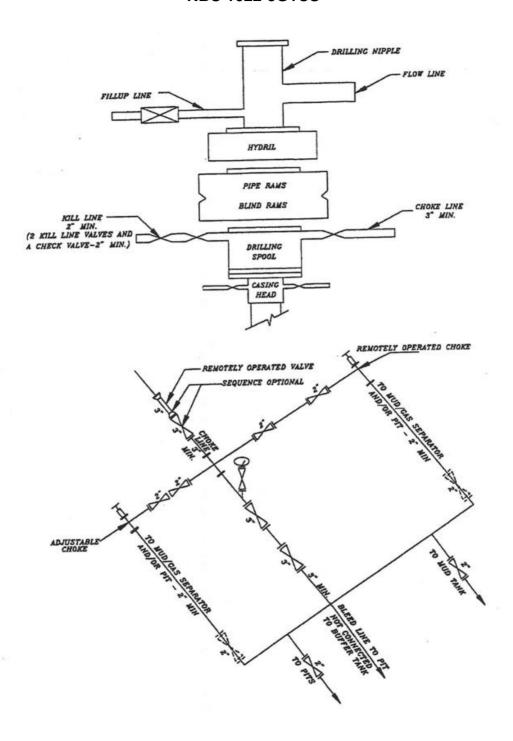
Kenny Gathings / Lovel Young

DATE:

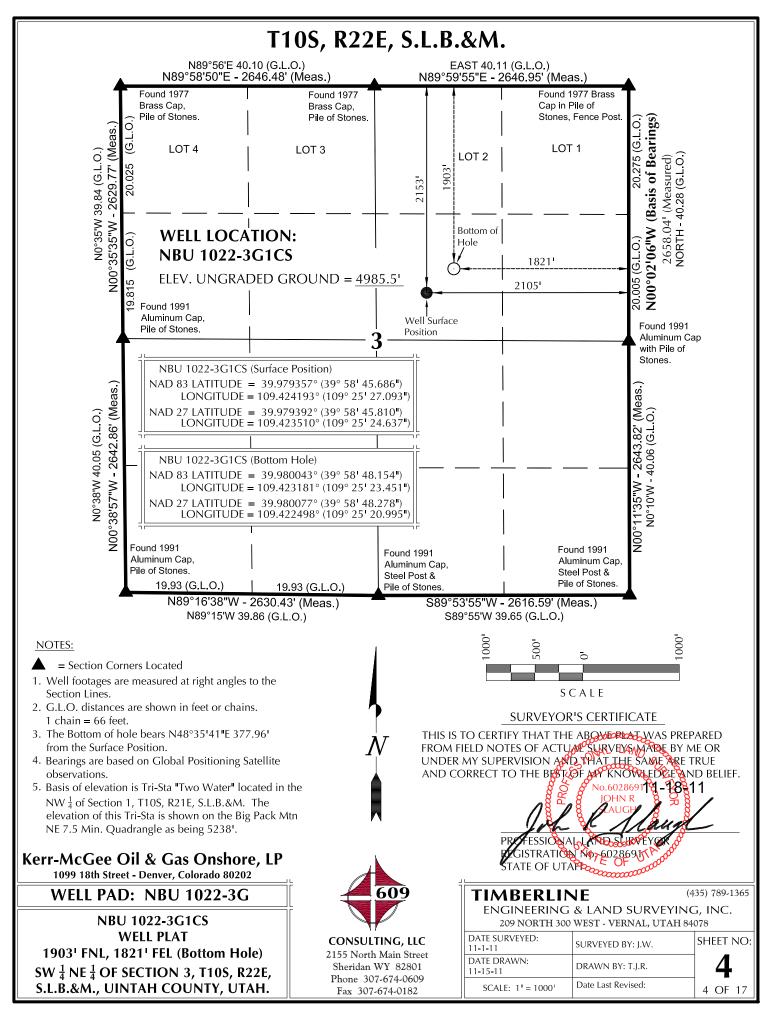
NBU 1022-3G Pad- Directional Drilling Program (2 wells) Approved by Drilling- 021412.xlsx

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

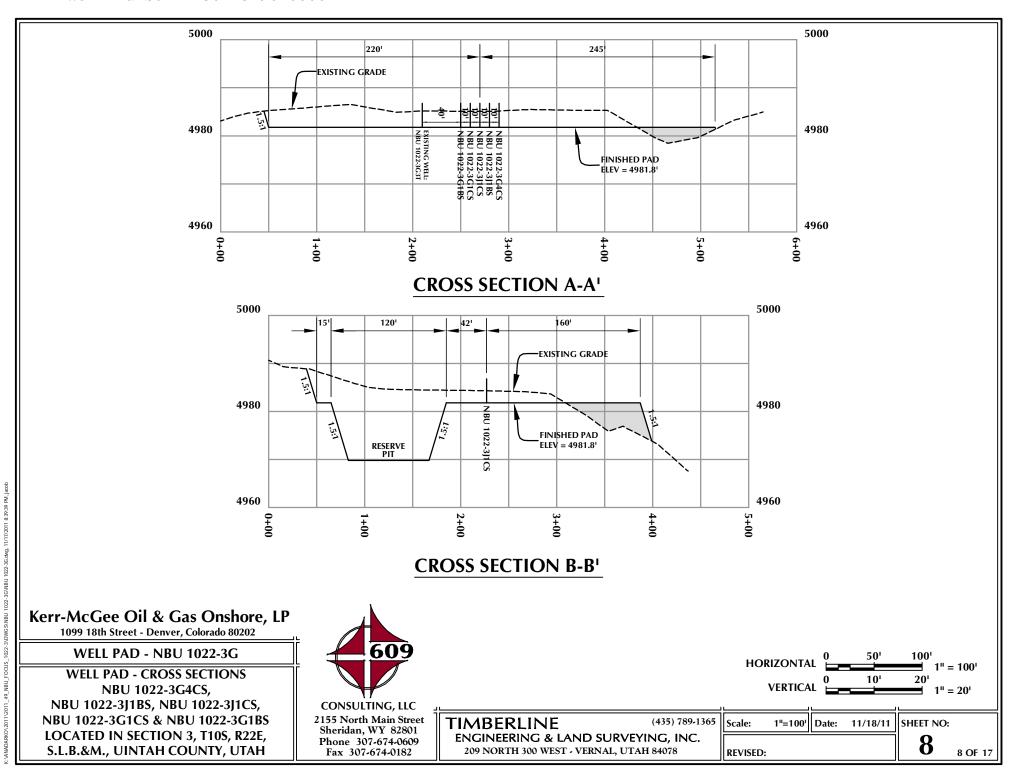
EXHIBIT A
NBU 1022-3G1CS

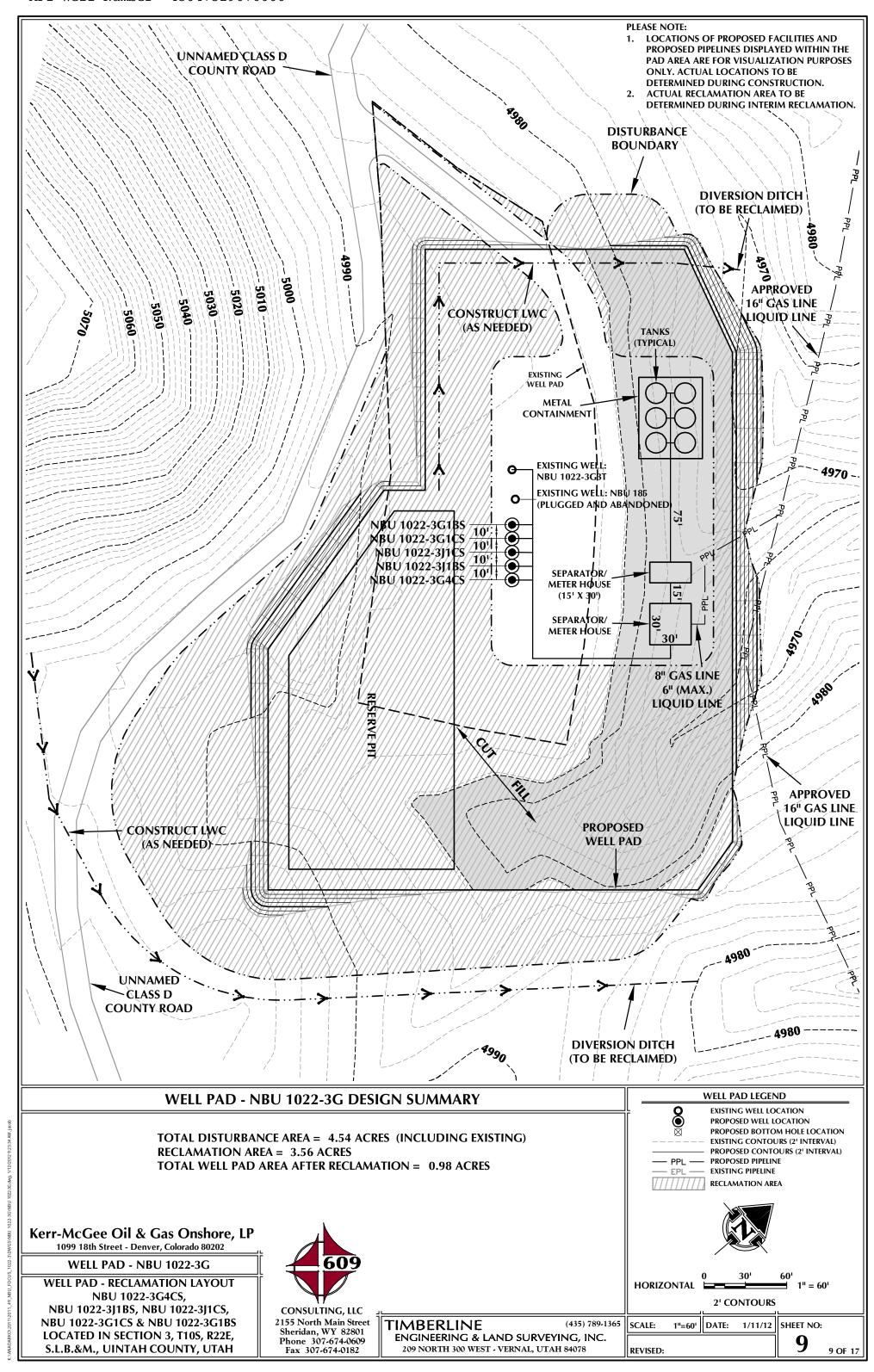


SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



			SURFACE PO						OTTOM HOLE		Г
WELL NAME	N/ LATITUDE	LONGITU	JDE LATITU	NAD27	ONGITUDE	FOOTAGES	NA LATITUDE	D83 LONGITUDE	NAI LATITUDE	D27 LONGITUDE	FOOTAGEG
NBU	39°58'45.491				9°25'24.346"	FOOTAGES 2173' FNL	39°58'41.614'				
1022-3G4CS	39.979303°	109.42411	2° 39.9793	37° 109	9.423430°	2082' FEL	39.978226°	109.423209°	39.978261°	109.422527°	1829' FEL
NBU 1022-3J1BS	39°58'45.556 39.979321°	109°25'26.			9°25'24.443" 9.423456°	2166' FNL 2090' FEL	39°58'38.274' 39.977298°	109°25'23.428" 109.423174°	39°58'38.398" 39.977333°	109°25'20.971" 109.422492°	2402 FSL 1820 FEL
NBU	39°58'45.621				9.423436° 9°25'24.539"		39°58'35.004'			109.422492* 109°25'20.959"	
1022-3J1CS	39.979339°	109.42416	6° 39.9793	74° 109	9.423483°	2097' FEL	39.976390°	109.423171°	39.976424°	109.422489°	1820' FEL
NBU 1022-3G1CS	39°58'45.686 39.979357°	" 109°25'27. 109.42419			9°25'24.637" 9.423510°	2153' FNL 2105' FEL	39°58'48.154' 39.980043°	109°25'23.451" 109.423181°	39°58'48.278" 39.980077°	109°25'20.995" 109.422498°	1903' FNL 1821' FEL
NBU	39°58'45.750				9°25'24.734"		39°58'51.424'			109.422498 109°25'20.995"	1572' FNL
1022-3G1BS	39.979375°	109.42422			9.423537°	2112' FEL	39.980951°	109.423181°	39.980986°	109.422499°	1821' FEL
NBU 185	39°58'45.888 39.979413°	" 109°25'27. 109.42426			9°25'24.893" 9.423581°	2132 FNL 2125 FEL					
NBU	39°58'46.010				9°25'25.121"	2120' FNL					
1022-3G3T	39.979447°	109.42432	7° 39.9794	82° 109	9.423645°	2142' FEL					
	T T					- 11	Position to Bot		II		
WELL NAME NBU	NORTH	EAST	WELL NAME NBU	NORT		NIDII			NBU WELL NAM		EAST
NBU 1022-3G4CS	-392.31	253.3'	1022-3J1BS	-736.9	9' 270.	7     NBU 1022-3	-107	74.5 279.3	1022-3G1C	250.0°	283.5
WELL NAME	NORTH	EAST				ļ					
NBU 1022-3G1BS	574.4'	290.91							_		
		1/2/20			/	165,126 1081,186 108014	18.00 M	Hole			
Az. to Exist. \	TING WEL W.H. NBU 10 le Marker) <b>E</b> )	022-3G3T=3	304.83861° 2 WELL: NB	ا 1.6 کا 1 <b>85</b> کا 185		10,10,	THE N S.L.B. GLOB	OF BEARINGS NE ¼ OF SECTIO &M. WHICH IS SAL POSITIONII RVATIONS TO	N 3, T10S, R2: Taken from NG Satellite	2E, 1	
Az. to Exist. \	W.H. NBU 1 le Marker) <b>E</b> )	022-3G3T=3	804.83861° 2 WELL: NB	ا 1.6 کا 1 <b>85</b> کا 185	BOS BOLL TO BOLL	10,10,	BASIS THE N S.L.B.: GLOB OBSEI  AT: 15265.  AT: 159.833	OF BEARINGS NE 4 OF SECTIO &M. WHICH IS SAL POSITIONII RVATIONS TO	N 3, T10S, R2: Taken from NG Satellite	2E, 1 '06"W.	109
Az. to Exist. V (Dry Hol	W.H. NBU 1 le Marker) <b>E</b> )	CISTING V	204.83861° 2 WELL: NB	1.6' 185 (1.6') 185 (1	RESCULLATION (TO BOILE)	10,10,	BASIS THE N S.L.B. GLOB OBSEI  A1 152 A68: A2 10 10 10 10 10 10 10 10 10 10 10 10 10	OF BEARINGS NE 1/4 OF SECTIO &M. WHICH IS SAL POSITIONII RVATIONS TO	N 3, T10S, R2: TAKEN FROM NG SATELLITE BEAR N00°02'  S C A L I	2E, 106"W.	35) 789-136
Az. to Exist. \ (Dry Hol	W.H. NBU 10 Ile Marker) E)  W  Gee Oil 8th Street - D	SE Gas Cenver, Color	Onshore, rado 80202	1.6' 185 (1.6') 185 (1	RECONSTRUCTION (TO BOILE)	S36 80° Az=165 42889° Az=165 47889° T110.19	BASIS THE N S.L.B. GLOB OBSEI  A1 152 A68: A2 10 10 10 10 10 10 10 10 10 10 10 10 10	OF BEARINGS NE 4 OF SECTIO &M. WHICH IS SAL POSITIONII RVATIONS TO	TAKEN FROM NG SATELLITE BEAR NO0°02'  S C A L I	2E, 1 '06"W.	35) 789-136 G, INC.
Kerr-McC 1099 1: WEL	Gee Oil 8th Street - D	Start And	Onshore, ado 80202 022-3G	1.6' 185 (1.6') 185 (1	Jan To Bone	609	BASIS THE N S.L.B. GLOB OBSEI  A1: 152 Association A2: 159: 833.06  A2: 15	OF BEARINGS NE 1/4 OF SECTIO &M. WHICH IS SAL POSITIONII RVATIONS TO  O  IMBERL ENGINEERIN 209 NORTH	INE IG & LAND 300 WEST - VER	2E, 1 106"W.  SURVEYINC RNAL, UTAH 840	35) 789-136 6, INC.
Kerr-McC 1099 1: WELL WRBU 1	Gee Oil atth Street - D L PAD - PAD INTIVELLS - NBU 1022-3J1BS	& Gas Cenver, Color NBU 10 ERFEREN J 1022-3G, NBU 102	Onshore, rado 80202 022-3G CE PLAT 14CS, 22-3J1CS,	1.6' 185 (1.6') 185 (1	CONS	Az=165 42889° Az=165 42889° GO9 GO9 Hole)  ULTING, LLC	BASIS THE N S.L.B. GLOB OBSEI  A1: K. Tobo  PA: S0: 159. 833.06  A2: 159. 833.06  PA: S0: TO Bottom Hole  TO Bottom Hole  OBSEI  A1: K. Tobo  TO Bottom Hole  OBSEI  A1: TO Bottom Hole  TO BO	OF BEARINGS NE 1/4 OF SECTIO &M. WHICH IS EAL POSITIONII RVATIONS TO  IMBERL ENGINEERIN 209 NORTH:	TAKEN FROM NG SATELLITE BEAR NO0°02'  S C A L I	2E, 1 106"W.  SURVEYINC RNAL, UTAH 840	35) 789-136 G, INC.
Verr-McC 1099 13 WELL WBU 1000 1100 1100 1100 1100 1100 1100 11	Gee Oil atth Street - D L PAD - PAD INT VELLS - NBU 1022-3J1BS 022-3G1CS	& Gas Cenver, Color NBU 10 ERFEREN J 1022-3G, NBU 102-3G, NBU 102-	Onshore, rado 80202 022-3G CE PLAT 14CS, 22-3J1CS, 022-3G1BS	1.6' 185 (1.6') 185 (1	CONSI 2155 No	609	BASIS THE N S.L.B. GLOB OBSEIN TO BOTTOM HOTE DATE TO BOTTOM HOTE DATE DATE DATE DATE DATE DATE DATE DA	OF BEARINGS NE 1/4 OF SECTIO &M. WHICH IS SAL POSITIONII RVATIONS TO	INE IG & LAND 300 WEST - VER	2E, 1 106"W.  E  SURVEYINC RNAL, UTAH 840 3Y: J.W.	35) 789-136 6, INC.
Verr-McC 1099 1: WELL WELL WNBU 1: LOCAT	Gee Oil atth Street - D L PAD - PAD INTIVELLS - NBU 1022-3J1BS	& Gas Cenver, Color NBU 1022-3G, NBU 1022-3G, NBU 1021GION 3, Tillon 3, Till	Onshore, rado 80202 022-3G CE PLAT 14CS, 22-3J1CS, 022-3G1BS 10S, R22E,	1.6' 185 (1.6') 185 (1	CONSI 2155 No Sherida	609  ULTING, LLC orth Main Street	BASIS THE N S.L.B., GLOB OBSEI  A1 152 466.  A2 10 01 1/E 185 08  A2 10 01 1/E 185 08  A2 11 11 1 DAT 11-1 DAT	OF BEARINGS NE 1/4 OF SECTIO &M. WHICH IS EAL POSITIONII RVATIONS TO  IMBERL ENGINEERIN 209 NORTH: TE SURVEYED:	S C A LI  S C & LAND  300 WEST - VER  SURVEYED B	2E, 1 106"W.  SURVEYINC RNAL, UTAH 840 BY: J.W. T.J.R.	35) 789-136 6, INC.





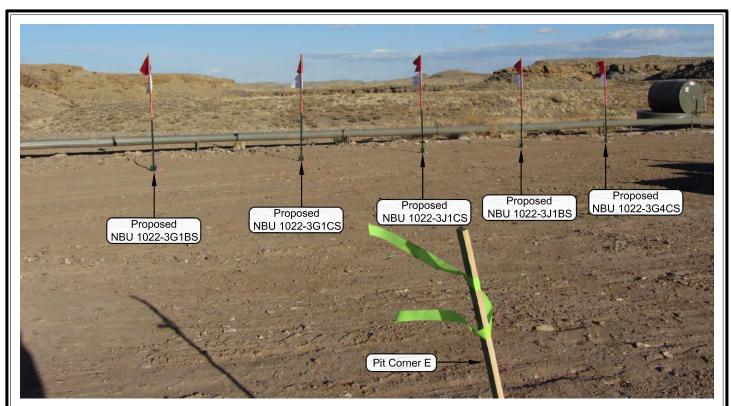


PHOTO VIEW: FROM PIT CORNER E TO LOCATION STAKE

**CAMERA ANGLE: NORTHEASTERLY** 



PHOTO VIEW: FROM EXISTING ACCESS ROAD

### **CAMERA ANGLE: SOUTHEASTERLY**

## Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

## WELL PAD - NBU 1022-3G

LOCATION PHOTOS

NBU 1022-3G4CS,

NBU 1022-3J1BS, NBU 1022-3J1CS,

NBU 1022-3G1CS & NBU 1022-3G1BS

LOCATED IN SECTION 3, T10S, R22E,

S.L.B.&M., UINTAH COUNTY, UTAH.



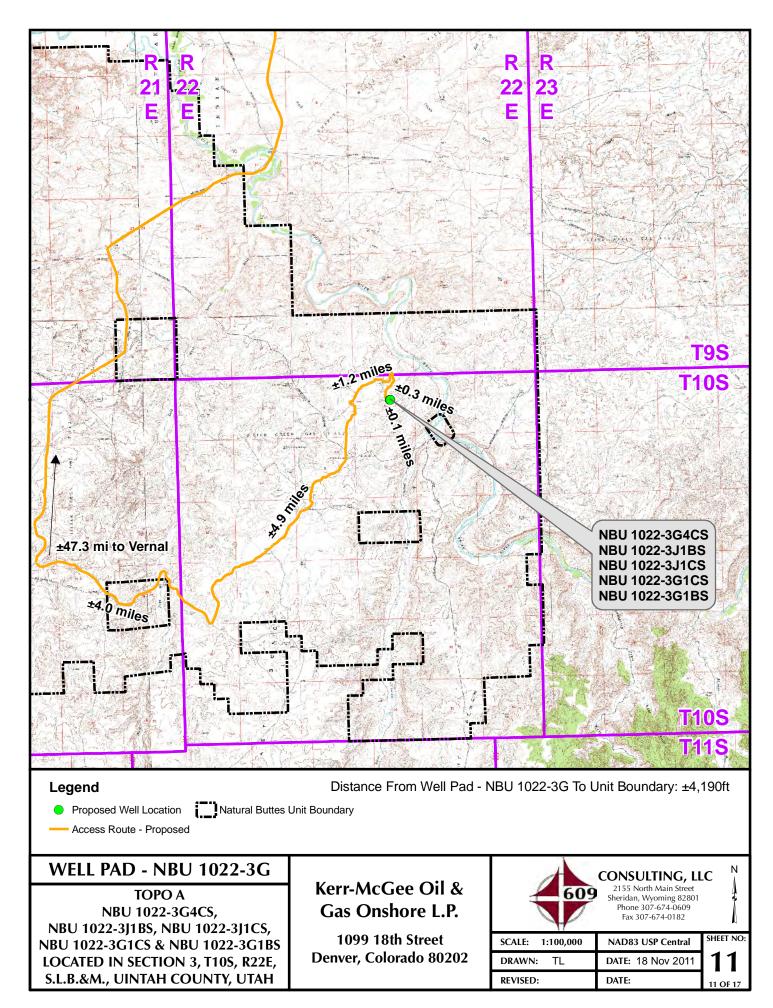
#### CONSULTING, LLC 2155 North Main Street Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

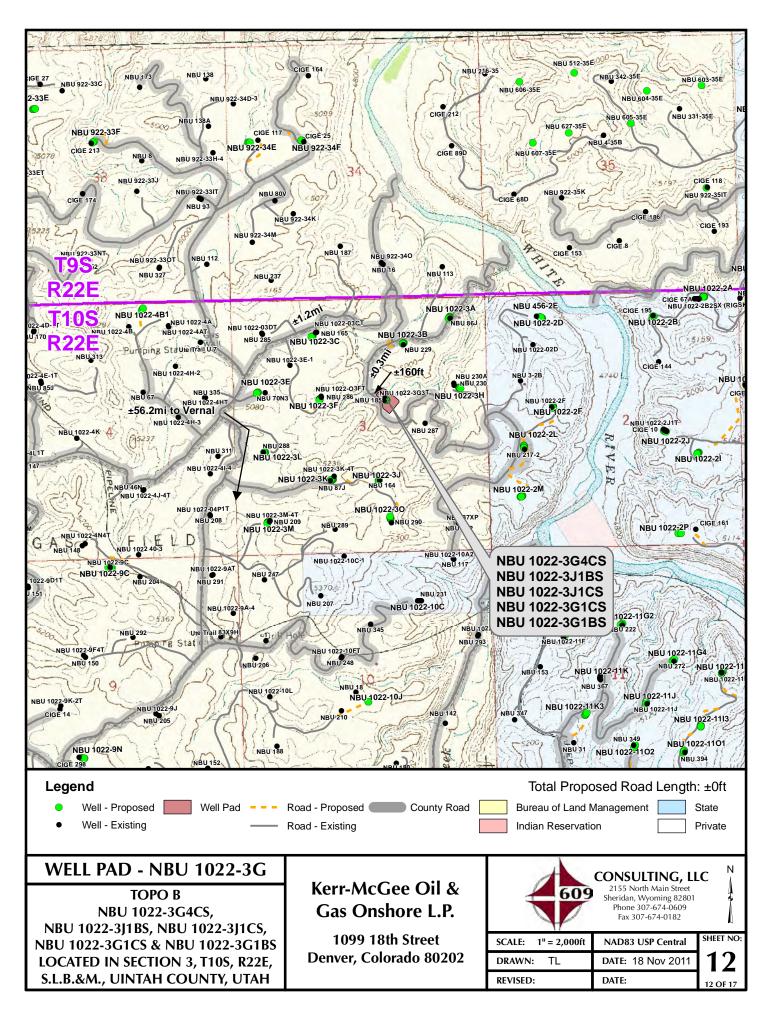
#### TIMBERLINE

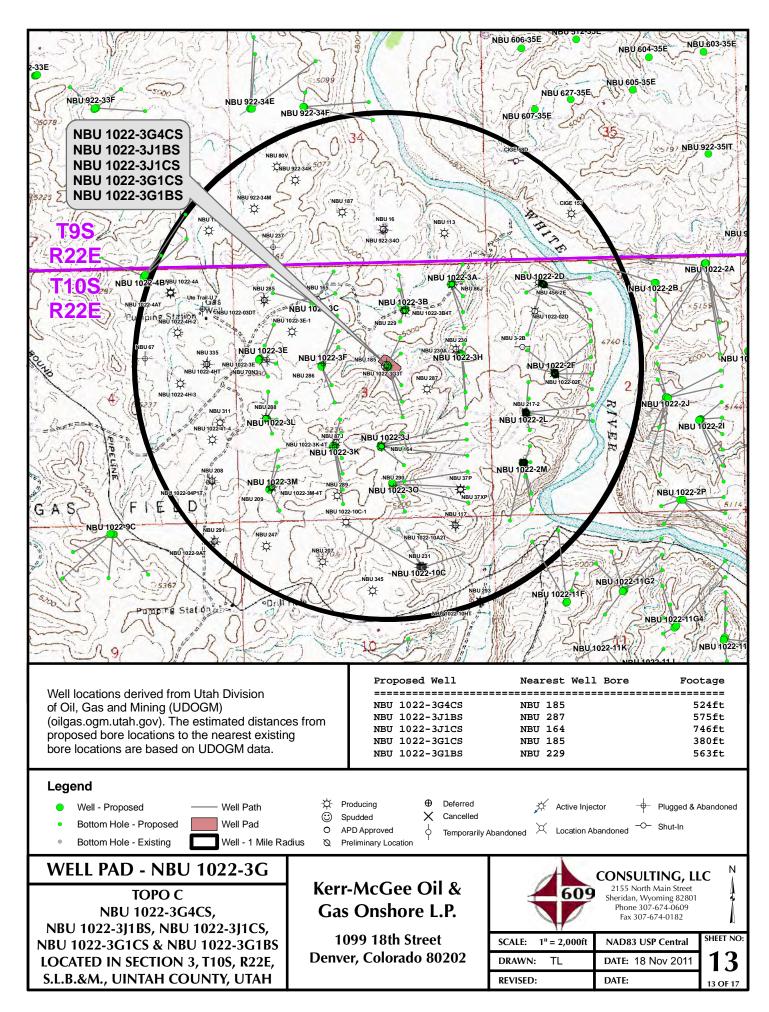
(435) 789-1365

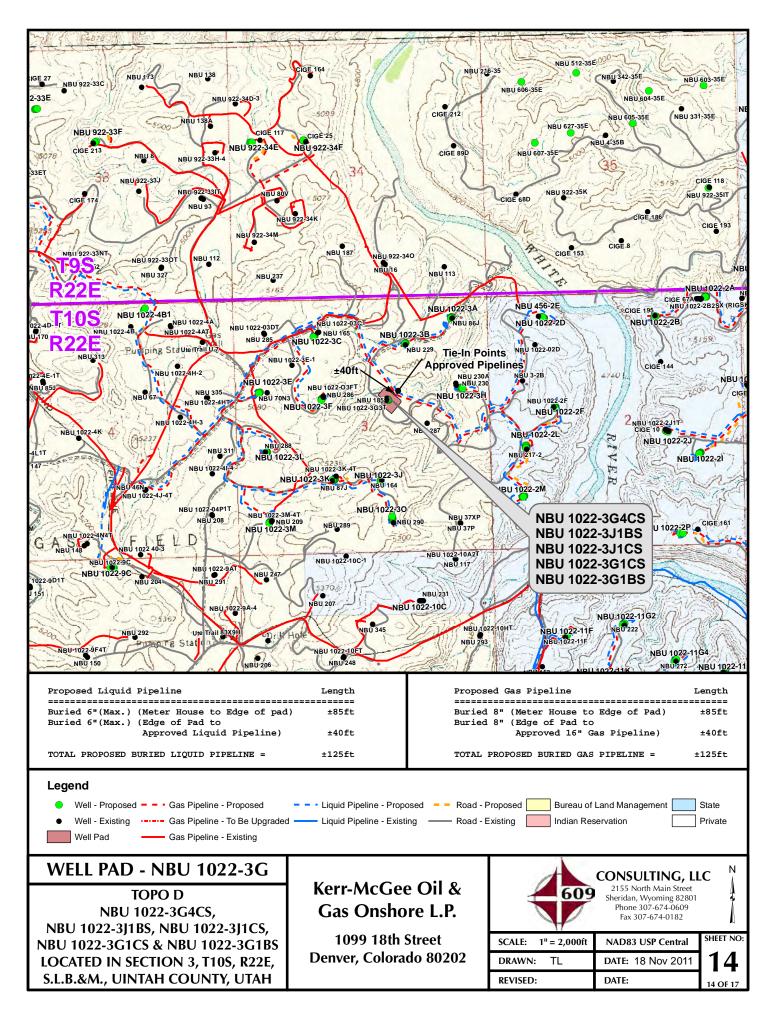
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

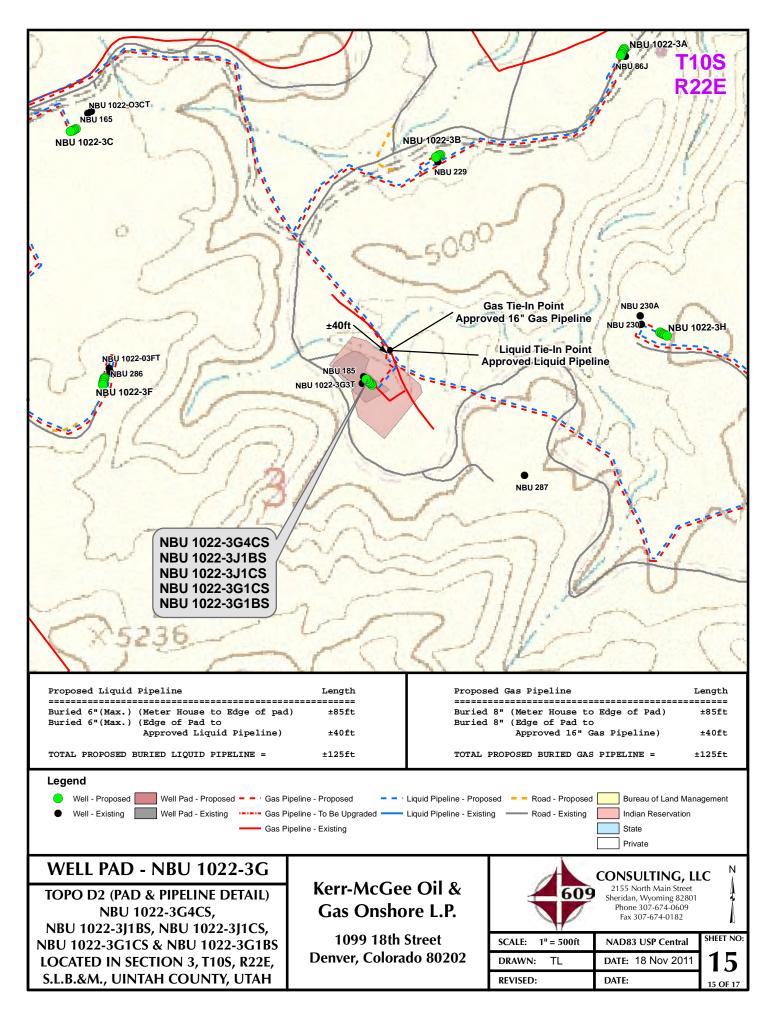
ı			
	DATE PHOTOS TAKEN: 11-1-11	PHOTOS TAKEN BY: W.W.	SHEET NO:
ı	DATE DRAWN: 11-15-11	DRAWN BY: T.J.R.	10
	Date Last Revised:		10 OF 17

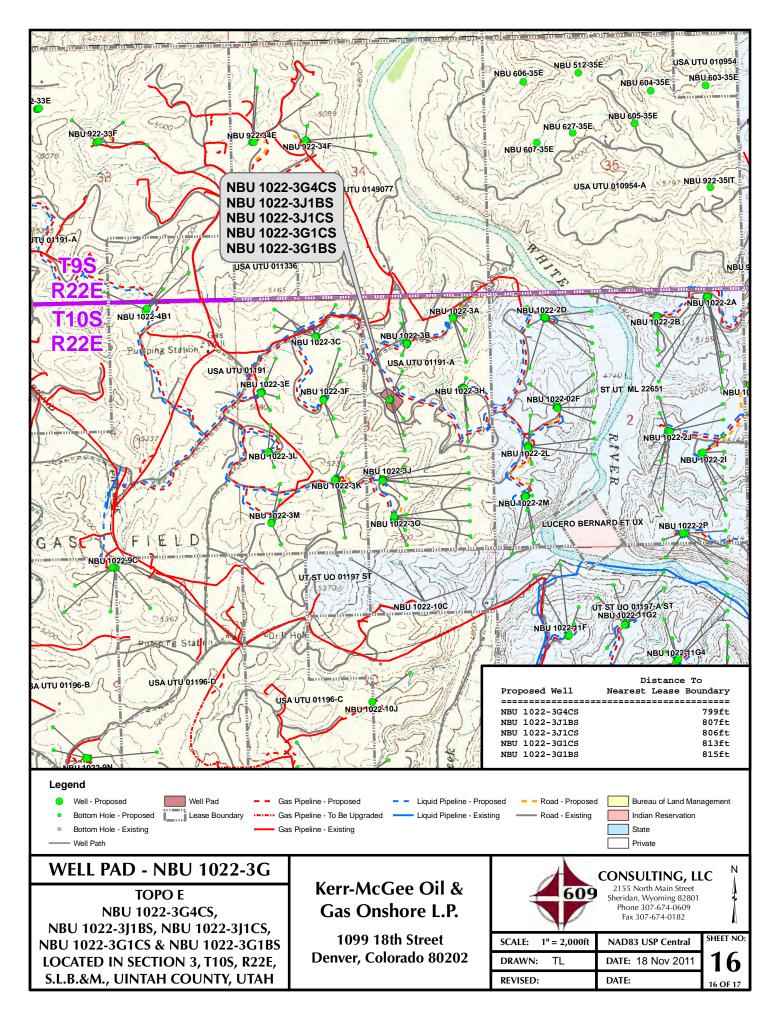












Kerr-McGee Oil & Gas Onshore, LP WELL PAD – NBU 1022-3G WELLS - NBU 1022-3G4CS, NBU 1022-3J1BS, NBU 1022-3J1CS, NBU 1022-3G1CS & NBU 1022-3G1BS Section 3, T10S, R22E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 23.8 miles to the intersection of the Bitter Creek Road (County B Road 4120). Exit left and proceed in a southeasterly direction along the Bitter Creek Road approximately 4.0 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 4.9 miles to a second Class D County Road to the northeast. Exit right and proceed in a northeasterly, then southerly direction along the second Class D County Road approximately 1.2 miles to a third Class D County Road to the southwest. Exit right and proceed in a southwesterly, then southerly direction along the third Class D County Road approximately 0.3 miles to a service road to the east. Exit left and proceed in an easterly direction along the service road approximately 160 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 57.7 miles in a southerly direction.

SHEET 17 OF 17

API Well Number: 43047 5203 (2007 A) - UTM (feet), NAD27, Zone 12N

Scientific Drilling
Rocky Mountain Operations

Site: NBU 1022-3G PAD Well: NBU 1022-3G1CS

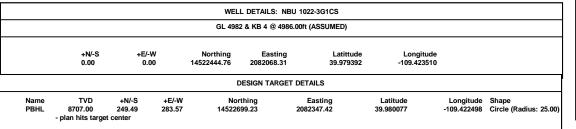
Wellbore: OH
Design: PLAN #1

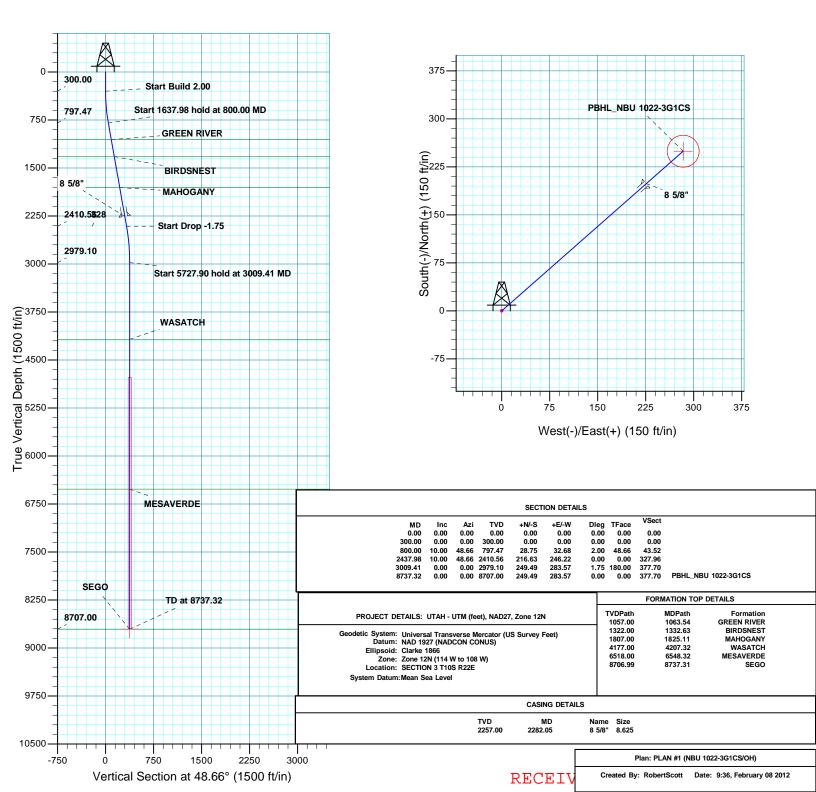




Azimuths to True North Magnetic North: 10.96°

> Magnetic Field Strength: 52263.5snT Dip Angle: 65.85° Date: 02/08/2012 Model: IGRF2010







## **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N NBU 1022-3G PAD NBU 1022-3G1CS

OH

Plan: PLAN #1

## **Standard Planning Report**

08 February, 2012



RECEIVED: July 06, 2012



## SDI Planning Report



EDM5000-RobertS-Local Database:

Company: US ROCKIES REGION PLANNING Project: UTAH - UTM (feet), NAD27, Zone 12N

NBU 1022-3G PAD Site: Well: NBU 1022-3G1CS

Wellbore: ОН PLAN #1 Design:

**Local Co-ordinate Reference:** 

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 1022-3G1CS

GL 4982 & KB 4 @ 4986.00ft (ASSUMED) GL 4982 & KB 4 @ 4986.00ft (ASSUMED)

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS) Geo Datum: Map Zone: Zone 12N (114 W to 108 W)

Mean Sea Level

NBU 1022-3G PAD, SECTION 3 T10S R22E Site

Northing: 14,522,425.14 usft Site Position: Latitude: 39.979337 From: Lat/Long Easting: 2,082,091.08 usft Longitude: -109.423430 **Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 1.01 13.200 in

System Datum:

Well NBU 1022-3G1CS, 2153 FNL 2105 FEL

**Well Position** +N/-S 20.03 ft 14,522,444.77 usft Latitude: 39.979392 Northing: +E/-W -22.42 ft Easting: 2,082,068.31 usft Longitude: -109.423510

0.00 ft Wellhead Elevation: **Ground Level:** 4,982.00 ft **Position Uncertainty** 

Wellbore ОН Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°) IGRF2010 02/08/12 10.96 65.85 52.264

PLAN #1 Design **Audit Notes:** Version: Phase: PLAN Tie On Depth: 0.00 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 48.66

lan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	10.00	48.66	797.47	28.75	32.68	2.00	2.00	0.00	48.66	
2,437.98	10.00	48.66	2,410.56	216.63	246.22	0.00	0.00	0.00	0.00	
3,009.41	0.00	0.00	2,979.10	249.49	283.57	1.75	-1.75	0.00	180.00	
8,737.32	0.00	0.00	8,707.00	249.49	283.57	0.00	0.00	0.00	0.00 PE	3HL_NBU 1022-30



# **SDI**Planning Report



Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 1022-3G PAD

 Well:
 NBU 1022-3G1CS

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well NBU 1022-3G1CS

GL 4982 & KB 4 @ 4986.00ft (ASSUMED) GL 4982 & KB 4 @ 4986.00ft (ASSUMED)

True

Minimum Curvature

JII.		FLAN#1								
nned Surv	vey									
De	sured epth ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Sta	rt Build 2.	00								
	400.00	2.00	48.66	399.98	1.15	1.31	1.75	2.00	2.00	0.00
	500.00	4.00	48.66	499.84	4.61	5.24	6.98	2.00	2.00	0.00
	600.00	6.00	48.66	599.45	10.37	11.78	15.69	2.00	2.00	0.00
	700.00	8.00	48.66	698.70	18.42	20.93	27.88	2.00	2.00	0.00
	800.00	10.00	48.66	797.47	28.75	32.68	43.52	2.00	2.00	0.00
Sta	rt 1637.98	hold at 800.00	MD							
	900.00	10.00	48.66	895.95	40.22	45.71	60.89	0.00	0.00	0.00
1	000 00	10.00	40.66	004.43	E1 60	E0 7E	70.05	0.00	0.00	0.00
	,000.00	10.00	48.66	994.43	51.69	58.75	78.25	0.00	0.00	0.00
	,063.54	10.00	48.66	1,057.00	58.98	67.03	89.29	0.00	0.00	0.00
	EEN RIVE									
	,100.00	10.00	48.66	1,092.91	63.16	71.79	95.62	0.00	0.00	0.00
	,200.00	10.00	48.66	1,191.39	74.63	84.82	112.98	0.00	0.00	0.00
1,	,300.00	10.00	48.66	1,289.87	86.10	97.86	130.35	0.00	0.00	0.00
1	,332.63	10.00	48.66	1.322.00	89.84	102.11	136.01	0.00	0.00	0.00
	DSNEST	10.00	10.00	1,022.00	00.01	102.11	100.01	0.00	0.00	0.00
		40.00	40.00	4 200 25	07.57	440.00	4 4 7 7 4	0.00	0.00	0.00
	,400.00	10.00	48.66	1,388.35	97.57	110.90	147.71	0.00	0.00	0.00
	,500.00	10.00	48.66	1,486.83	109.04	123.94	165.08	0.00	0.00	0.00
	,600.00	10.00	48.66	1,585.31	120.51	136.97	182.44	0.00	0.00	0.00
1,	,700.00	10.00	48.66	1,683.79	131.98	150.01	199.81	0.00	0.00	0.00
1.	,800.00	10.00	48.66	1,782.27	143.45	163.05	217.17	0.00	0.00	0.00
	,825.11	10.00	48.66	1,807.00	146.33	166.32	221.53	0.00	0.00	0.00
	HOGANY									
	,900.00	10.00	48.66	1,880.75	154.92	176.08	234.54	0.00	0.00	0.00
	,000.00	10.00	48.66	1,979.23	166.39	189.12	251.90	0.00	0.00	0.00
	,100.00	10.00	48.66	2,077.72	177.86	202.16	269.27	0.00	0.00	0.00
	,200.00	10.00	48.66	2,176.20	189.33	215.20	286.63	0.00	0.00	0.00
2	,282.05	10.00	48.66	2,257.00	198.75	225.89	300.88	0.00	0.00	0.00
8 5/	8"									
2	,300.00	10.00	48.66	2,274.68	200.81	228.23	303.99	0.00	0.00	0.00
2	,400.00	10.00	48.66	2,373.16	212.28	241.27	321.36	0.00	0.00	0.00
2	,437.98	10.00	48.66	2,410.56	216.63	246.22	327.96	0.00	0.00	0.00
Sta	rt Drop -1.	.75								
	-		40.00	0.474.74	000.00	050.05	200.45	4 75	4 75	0.00
	,500.00	8.91	48.66	2,471.74	223.36	253.87	338.15	1.75	-1.75	0.00
	,600.00	7.16	48.66	2,570.75	232.60	264.37	352.13	1.75	-1.75	0.00
	,700.00	5.41	48.66	2,670.14	239.84	272.60	363.09	1.75	-1.75	0.00
	,800.00	3.66	48.66	2,769.83	245.07	278.54	371.00	1.75	-1.75	0.00
2	,900.00	1.91	48.66	2,869.70	248.28	282.19	375.87	1.75	-1.75	0.00
3	,000.00	0.16	48.66	2,969.68	249.48	283.56	377.68	1.75	-1.75	0.00
	,009.41	0.00	0.00	2,979.10	249.49	283.57	377.70	1.75	-1.75	0.00
		hold at 3009.41		,						
	,100.00	0.00	0.00	3,069.68	249.49	283.57	377.70	0.00	0.00	0.00
	,200.00	0.00	0.00	3,169.68	249.49	283.57	377.70	0.00	0.00	0.00
	,300.00	0.00	0.00	3,269.68	249.49	283.57	377.70	0.00	0.00	0.00
	,400.00	0.00	0.00	3,369.68	249.49	283.57	377.70	0.00	0.00	0.00
	,500.00	0.00	0.00	3,469.68	249.49	283.57	377.70	0.00	0.00	0.00
3	,600.00	0.00	0.00	3,569.68	249.49	283.57	377.70	0.00	0.00	0.00
3	,700.00	0.00	0.00	3,669.68	249.49	283.57	377.70	0.00	0.00	0.00
•	,800.00	0.00	0.00	3,769.68	249.49	283.57	377.70	0.00	0.00	0.00



# **SDI**Planning Report



Database: Company: EDM5000-RobertS-Local

US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 1022-3G PAD

 Well:
 NBU 1022-3G1CS

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well NBU 1022-3G1CS

GL 4982 & KB 4 @ 4986.00ft (ASSUMED) GL 4982 & KB 4 @ 4986.00ft (ASSUMED)

True

Minimum Curvature

sign:	PLAN #1								
anned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,900.00	0.00	0.00	3,869.68	249.49	283.57	377.70	0.00	0.00	0.00
4,000.00	0.00	0.00	3,969.68	249.49	283.57	377.70	0.00	0.00	0.00
4,100.00	0.00	0.00	4,069.68	249.49	283.57	377.70	0.00	0.00	0.00
4,200.00	0.00	0.00	4,169.68	249.49	283.57	377.70	0.00	0.00	0.00
4,207.32	0.00	0.00	4,177.00	249.49	283.57	377.70	0.00	0.00	0.00
WASATCH									
4,300.00	0.00	0.00	4,269.68	249.49	283.57	377.70	0.00	0.00	0.00
4,400.00	0.00	0.00	4,369.68	249.49	283.57	377.70	0.00	0.00	0.00
4,500.00	0.00	0.00	4,469.68	249.49	283.57	377.70	0.00	0.00	0.00
4,600.00	0.00	0.00	4,569.68	249.49	283.57	377.70	0.00	0.00	0.00
4,700.00	0.00	0.00	4,669.68	249.49	283.57	377.70	0.00	0.00	0.00
4,800.00	0.00	0.00	4,769.68	249.49	283.57	377.70	0.00	0.00	0.00
4,900.00	0.00	0.00	4,869.68	249.49	283.57	377.70	0.00	0.00	0.00
5,000.00	0.00	0.00	4,969.68	249.49	283.57	377.70	0.00	0.00	0.00
5,100.00	0.00	0.00	5,069.68	249.49	283.57	377.70	0.00	0.00	0.00
5,200.00	0.00	0.00	5,169.68	249.49	283.57	377.70	0.00	0.00	0.00
5,300.00	0.00	0.00	5,269.68	249.49	283.57	377.70	0.00	0.00	0.00
5,400.00	0.00	0.00	5,369.68	249.49	283.57	377.70	0.00	0.00	0.00
5,500.00	0.00	0.00	5,469.68	249.49	283.57	377.70	0.00	0.00	0.00
5,600.00	0.00	0.00	5,569.68	249.49	283.57	377.70	0.00	0.00	0.00
5,700.00	0.00	0.00	5,669.68	249.49	283.57	377.70	0.00	0.00	0.00
5,800.00	0.00	0.00	5,769.68	249.49	283.57	377.70	0.00	0.00	0.00
5,900.00	0.00	0.00	5,869.68	249.49	283.57	377.70	0.00	0.00	0.00
6,000.00	0.00	0.00	5,969.68	249.49	283.57	377.70	0.00	0.00	0.00
6,100.00	0.00	0.00	6,069.68	249.49	283.57	377.70	0.00	0.00	0.00
6,200.00	0.00	0.00	6,169.68	249.49	283.57	377.70	0.00	0.00	0.00
6 200 00	0.00	0.00	6 260 60	249.49	202 57	277 70	0.00	0.00	0.00
6,300.00 6,400.00	0.00 0.00	0.00 0.00	6,269.68 6,369.68	249.49	283.57 283.57	377.70 377.70	0.00 0.00	0.00	0.00 0.00
6,500.00	0.00	0.00	6,469.68	249.49	283.57	377.70	0.00	0.00	0.00
6,548.32	0.00	0.00	6,518.00	249.49	283.57	377.70	0.00	0.00	0.00
MESAVERD		0.00	0,510.00	249.49	200.01	377.70	0.00	0.00	0.00
6,600.00	0.00	0.00	6,569.68	249.49	283.57	377.70	0.00	0.00	0.00
			,						
6,700.00	0.00	0.00	6,669.68	249.49	283.57	377.70	0.00	0.00	0.00
6,800.00	0.00	0.00	6,769.68	249.49	283.57	377.70	0.00	0.00	0.00
6,900.00	0.00	0.00	6,869.68	249.49	283.57	377.70	0.00	0.00	0.00
7,000.00	0.00	0.00	6,969.68	249.49	283.57	377.70	0.00	0.00	0.00
7,100.00	0.00	0.00	7,069.68	249.49	283.57	377.70	0.00	0.00	0.00
7,200.00	0.00	0.00	7,169.68	249.49	283.57	377.70	0.00	0.00	0.00
7,300.00	0.00	0.00	7,269.68	249.49	283.57	377.70	0.00	0.00	0.00
7,400.00	0.00	0.00	7,369.68	249.49	283.57	377.70	0.00	0.00	0.00
7,500.00	0.00	0.00	7,469.68	249.49	283.57	377.70	0.00	0.00	0.00
7,600.00	0.00	0.00	7,569.68	249.49	283.57	377.70	0.00	0.00	0.00
7,700.00	0.00	0.00	7,669.68	249.49	283.57	377.70	0.00	0.00	0.00
7,800.00	0.00	0.00	7,769.68	249.49	283.57	377.70	0.00	0.00	0.00
7,900.00	0.00	0.00	7,869.68	249.49	283.57	377.70	0.00	0.00	0.00
8,000.00	0.00	0.00	7,969.68	249.49	283.57	377.70	0.00	0.00	0.00
8,100.00	0.00	0.00	8,069.68	249.49	283.57	377.70	0.00	0.00	0.00
8,200.00	0.00	0.00	8,169.68	249.49	283.57	377.70	0.00	0.00	0.00
8,300.00 8,400.00	0.00 0.00	0.00 0.00	8,269.68 8,369.68	249.49 249.49	283.57 283.57	377.70 377.70	0.00 0.00	0.00 0.00	0.00 0.00
8,400.00 8,500.00	0.00	0.00	8,369.68 8,469.68	249.49 249.49	283.57 283.57	377.70 377.70	0.00	0.00	0.00
8,600.00	0.00	0.00	8,569.68	249.49	283.57 283.57	377.70 377.70	0.00	0.00	0.00
8,700.00	0.00	0.00	8,669.68	249.49	283.57	377.70	0.00	0.00	0.00
8,737.31	0.00	0.00	8,706.99	249.49	283.57	377.70	0.00	0.00	0.00



## **SDI**Planning Report



Database: Company: EDM5000-RobertS-Local

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

 Project:
 UTAH - UTM (feet),

 Site:
 NBU 1022-3G PAD

 Well:
 NBU 1022-3G1CS

 Well:
 NBU 1022-3G1CS

 Wellbore:
 OH

 Design:
 PLAN #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well NBU 1022-3G1CS

GL 4982 & KB 4 @ 4986.00ft (ASSUMED) GL 4982 & KB 4 @ 4986.00ft (ASSUMED)

True

Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
SEGO									
8,737.32	0.00	0.00	8,707.00	249.49	283.57	377.70	0.00	0.00	0.00
TD at 8737.3	2 - PBHL_NBU 1	022-3G1CS							

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-3G1C - plan hits target cen - Circle (radius 25.00	ter	0.00	8,707.00	249.49	283.57	14,522,699.23	2,082,347.42	39.980077	-109.422498

Casing Points					
	Measured	Vertical		Casing Hole	
	Depth	Depth		Diameter Diameter	
	(ft)	(ft)	Name	(in) (in)	
	2,282.05	2,257.00 8 5/8"		8.625 11.000	

Formations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	1,063.54	1,057.00	GREEN RIVER			
	1,332.63	1,322.00	BIRDSNEST			
	1,825.11	1,807.00	MAHOGANY			
	4,207.32	4,177.00	WASATCH			
	6,548.32	6,518.00	MESAVERDE			
	8,737.31	8,706.99	SEGO		0.00	

Plan Annotations				
Measured	Vertical	Local Coore	dinates	
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
800.00	797.47	28.75	32.68	Start 1637.98 hold at 800.00 MD
2,437.98	2,410.56	216.63	246.22	Start Drop -1.75
3,009.41	2,979.10	249.49	283.57	Start 5727.90 hold at 3009.41 MD
8,737.32	8,707.00	249.49	283.57	TD at 8737.32

## Kerr-McGee Oil & Gas Onshore. L.P.

#### **NBU 1022-3G PAD**

<u> API #</u>		NBU 1022-3G1BS		
	Surface:	2146 FNL / 2112 FEL	SWNE	Lot
	BHL:	1572 FNL / 1821 FEL	SWNE	Lot
<u>API #</u>		NBU 1022-3G1CS		
	Surface:	2153 FNL / 2105 FEL	SWNE	Lot
	BHL:	1903 FNL / 1821 FEL	SWNE	Lot
API #4304750172		NBU 1022-3G4CS		
	Surface:	2173 FNL / 2082 FEL	SWNE	Lot
	BHL:	2565 FNL / 1829 FEL	SWNE	Lot
<u>API #</u>		NBU 1022-3J1BS		
	Surface:	2166 FNL / 2090 FEL	SWNE	Lot
	BHL:	2402 FSL / 1820 FEL	NWSE	Lot
<u>API #</u>		NBU 1022-3J1CS		
	Surface:	2159 FNL / 2097 FEL	SWNE	Lot
	BHL:	2071 FSL / 1820 FEL	NWSE	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on December 6, 2011. Present were:

- · David Gordon, Tyler Cox BLM;
- · Jacob Dunham 609 Consulting;
- John Slaugh, Mitch Batty Timberline Engineering & Land Surveying, Inc.; and
- · Gina Becker, Charles Chase, Doyle Holmes, Casey McGee, Grizz Oleen, Sheila Wopsock Kerr-McGee

#### A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

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Please refer to Topo B, for existing roads.

#### B. New or Reconstructed Access Roads:

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM. BMPs. Described in the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007) and/or BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, Kerr-McGee will adhere to the requirements of applicable Nationwide Permits of the Department of Army Corps of Engineers.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

There are no new proposed access roads associated with this pad. Please refer to Topo B.

## **C.** Location of Existing Wells:

A) Refer to Topo Map C.

#### D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the NBU 1022-3G3T, which is a producing gas well, and the NBU 185, which is a plugged and abadoned well according to Utah Division of Oil, Gas and Mining (UDOGM) records on February 10, 2012. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accomodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

#### **GAS GATHERING**

Please refer to Exhibit A and Topo D2- Pad and Pipeline Detail.

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is  $\pm 125$ ' and the individual segments are broken up as follows:

The following segments are "onlease", no ROW needed.

- $\pm 85$ ' (0.02 miles) Section 3 T10S R22E (SW/4 NE/4) On-lease UTU-01191A, BLM surface, New 8" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.
- ±40' (0.01 miles) Section 3 T10S R22E (SW/4 NE/4) On-lease UTU-01194A, BLM surface, New 8" buried gas gathering pipeline from the edge of the pad to tie-in to the approved 16" gas pipeline. Please refer to Topo D2 Pad and Pipeline Detail and Exhibit A, Line 14.

#### LIQUID GATHERING

Please refer to Exhibit B and Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 125$ ' and the individual segments are broken up as follows:

The following segments are "onlease", no ROW needed.

- ±85' (0.02 miles) Section 3 T10S R22E (SW/4 NE/4) On-lease UTU-01191A, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.
- $\pm 40$ ' (0.01 miles) Section 3 T10S R22E (SW/4 NE/4) On-lease UTU-01191A, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to tie-in to the approved liquid pipeline. Please refer to Topo D2 Pad and Pipeline Detail and Exhibit B, Line 14.

#### **Pipeline Gathering Construction**

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30'

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distrubance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent distrubance width is for maintenance and repairs. Cross country permanent distrubance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

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When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

## The Anadarko Completions Transportation System (ACTS) information:

Please refer to Exhibit C for ACTs Lines

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is disussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom or pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

Any hydrocarbons collected will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit .

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

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#### E. Location and Types of Water Supply:

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

#### F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from federal lands without prior approval from the BLM. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

#### G. Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BLM, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a reserve/completion pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for

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ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

## **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced

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water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E NBU #159 in Sec. 35 T9S R21E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 34 T9S R21E

#### H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

#### I. Well Site Layout:

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of distrubance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

#### J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

NBU 1022-3G1BS/ 1022-3G1CS/ 1022-3G4CS/ 1022-3J1BS/ 1022-3J1CS

Surface Use Plan of Operations 9 of 13

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

#### Interim Reclamation

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

#### **Final Reclamation**

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

#### **Measures Common to Interim and Final Reclamation**

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

2/15/2012

NBU 1022-3G1BS/ 1022-3G1CS/ 1022-3G4CS/ 1022-3J1BS/ 1022-3J1CS

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a "picker box" in order to seed "fluffy" seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain "cheat grass free seed".

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Bonanza Area Mix	Pure Live Seed lbs/acre
Crested Wheat (Hycrest)	2
Bottlebrush Squirreltail	1
Western Wheatgrass	1
(Arriba)	
Indian Ricegrass	1
Fourwing Saltbush	2
Shadscale	2
Forage Kochia	0.25
Rocky Mountain Bee	0.5
Total	9.75

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as "Sustain" (an organic fertilizer that will be applied at the rate 1,800 - 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

#### **Weed Control**

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Permit (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

#### Monitoring

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

#### K. Surface/Mineral Ownership:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435)781-4400

#### L. Other Information:

#### **Onsite Specifics:**

- Armor fill slope from corner 12 to corner 13.
- Facilities: Will be painted Shadow Grey
- Top Soil: Need to save 4" topsoil and will be move and put around the corner
- Need to obtain a storm water permit
- BMP on the pit use (waddles, hay bails or silt fence)

#### **Cultural and Paleontological Resources**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BLM.

#### **Resource Reports:**

A Class I literature review was completed on February 1, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 11-404.

A paleontological reconnaissance survey was completed on February 3, 2012 by Intermountain Paleo Consultants. For additional details please refer to report IPC 11-202PRE.

Biological field survey was completed on June 15, 2011 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-687.

#### **Proposed Action Annual Emissions Tables:**

Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup>				
Pollutant	Development	Production	Total	
NOx	3.8	0.12	3.92	
CO	2.2	0.11	2.31	
VOC	0.1	4.9	5	
$SO_2$	0.005	0.0043	0.0093	
$PM_{10}$	1.7	0.11	1.81	
PM <sub>2.5</sub>	0.4	0.025	0.425	
Benzene	2.2E-03	0.044	0.046	
Toluene	1.6E-03	0.103	0.105	
Ethylbenzene	3.4E-04	0.005	0.005	
Xylene	1.1E-03	0.076	0.077	
n-Hexane	1.7E-04	0.145	0.145	
Formaldehyde	1.3E-02	8.64E-05	1.31E-02	

 $\overline{\phantom{a}}$  Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

2/15/2012

NBU 1022-3G1BS/ 1022-3G1CS/ 1022-3G4CS/ 1022-3J1BS/ 1022-3J1CS Surface Use Plan of Operations 12 of 13

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison				
Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory <sup>a</sup> (ton/yr)	to WRAP Phase	
NOx	19.6	16,547	0.12%	
VOC	25	127,495	0.02%	

<sup>&</sup>lt;sup>a</sup> http://www.wrapair.org/forums/ogwg/PhaseIII\_Inventory.html

API Well Number: 43047529070000

NBU 1022-3G1BS/ 1022-3G1CS/ 1022-3G4CS/ 1022-3J1BS/ 1022-3J1CS Surface Use Plan of Operations 13 of 13

#### M. Lessee's or Operators' Representative & Certification:

Gina T. Becker Regulatory Analyst II Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6086 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Gina T.Becker

February 15, 2012

Date



Kerr-McGee Oil & Gas Onshore LP 1099 18TH STREET STE. 1800 DENVER, CO 80202 720-929-6708 • FAX 720-929-7708 E-MAIL: JOE.JOHNSON@ANADARKO.COM

February 14, 2012

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11

NBU 1022-3G1CS

T10S-R22E

Section 3: SWNE/SWNE Surface: 2153' FNL, 2105' FEL Bottom Hole: 1903' FNL, 1821' FEL

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 1022-3G1CS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

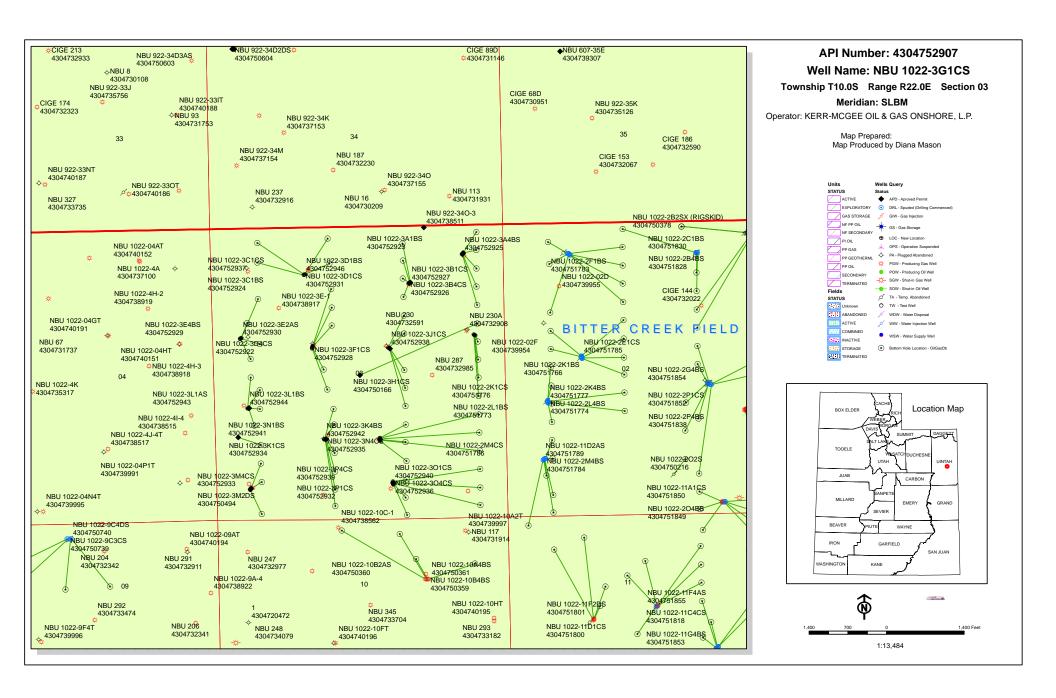
Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joseph D. Johnson Landman

RECEIVED: July 06, 2012



API Well Number: 43047529070000

### **United States Department of the Interior**

#### BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

July 16, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2012 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

#### WELL PAD - NBU 1022-3H

43-047-52902 NBU 1022-3H4CS Sec 03 T10S R22E 1949 FNL 0549 FEL BHL Sec 03 T10S R22E 2396 FNL 0494 FEL Sec 03 T10S R22E 1939 FNL 0567 FEL 43-047-52906 NBU 1022-3I1CS BHL Sec 03 T10S R22E 2232 FSL 0494 FEL 43-047-52910 NBU 1022-3H4BS Sec 03 T10S R22E 1953 FNL 0540 FEL BHL Sec 03 T10S R22E 2065 FNL 0494 FEL 43-047-52914 NBU 1022-3I1BS Sec 03 T10S R22E 1944 FNL 0558 FEL BHL Sec 03 T10S R22E 2562 FSL 0494 FEL WELL PAD - NBU 1022-3G 43-047-52903 NBU 1022-3J1BS Sec 03 T10S R22E 2166 FNL 2090 FEL BHL Sec 03 T10S R22E 2402 FSL 1820 FEL 43-047-52907 NBU 1022-3G1CS Sec 03 T10S R22E 2153 FNL 2105 FEL BHL Sec 03 T10S R22E 1903 FNL 1821 FEL 43-047-52917 NBU 1022-3G1BS Sec 03 T10S R22E 2146 FNL 2112 FEL BHL Sec 03 T10S R22E 1572 FNL 1821 FEL 43-047-52938 NBU 1022-3J1CS Sec 03 T10S R22E 2159 FNL 2097 FEL BHL Sec 03 T10S R22E 2071 FSL 1820 FEL

RECEIVED: July 18, 2012

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

#### WELL PAD - NBU 1022-3F

43-047-52904 NBU 1022-3K1BS Sec 03 T10S R22E 2143 FNL 1787 FWL BHL Sec 03 T10S R22E 2399 FSL 2046 FWL

43-047-52913 NBU 1022-3F4CS Sec 03 T10S R22E 2133 FNL 1790 FWL

BHL Sec 03 T108 R22E 2531 FNL 1987 FWL

43-047-52919 NBU 1022-3F1BS Sec 03 T10S R22E 2114 FNL 1795 FWL

BHL Sec 03 T10S R22E 1411 FNL 2159 FWL

43-047-52921 NBU 1022-3C4CS Sec 03 T10S R22E 2104 FNL 1798 FWL

BHL Sec 03 T10S R22E 1078 FNL 2153 FWL

43-047-52928 NBU 1022-3F1CS Sec 03 T10S R22E 2123 FNL 1793 FWL

BHL Sec 03 T10S R22E 1742 FNL 2152 FWL

#### WELL PAD - NBU 1022-3J

43-047-52905 NBU 1022-3J4BS Sec 03 T10S R22E 1505 FSL 2293 FEL

BHL Sec 03 T10S R22E 1740 FSL 1820 FEL

43-047-52908 NBU 1022-3I4BS Sec 03 T10S R22E 1496 FSL 2294 FEL

BHL Sec 03 T10S R22E 1901 FSL 0494 FEL

43-047-52912 NBU 1022-301BS Sec 03 T10S R22E 1456 FSL 2295 FEL

BHL Sec 03 T10S R22E 1077 FSL 1819 FEL

43-047-52915 NBU 1022-3P1BS Sec 03 T10S R22E 1466 FSL 2295 FEL

BHL Sec 03 T10S R22E 1240 FSL 0494 FEL

43-047-52916 NBU 1022-3I4CS Sec 03 T10S R22E 1486 FSL 2294 FEL

BHL Sec 03 T10S R22E 1571 FSL 0494 FEL

#### WELL PAD - NBU 1022-3A

43-047-52909 NBU 1022-3H1BS Sec 03 T10S R22E 0488 FNL 0748 FEL

BHL Sec 03 T10S R22E 1405 FNL 0495 FEL

43-047-52923 NBU 1022-3A1BS Sec 03 T10S R22E 0453 FNL 0728 FEL

BHL Sec 03 T10S R22E 0083 FNL 0488 FEL

43-047-52925 NBU 1022-3A4BS Sec 03 T10S R22E 0470 FNL 0738 FEL

BHL Sec 03 T10S R22E 0744 FNL 0495 FEL

#### WELL PAD - NBU 1022-3K

43-047-52918 NBU 1022-3N1CS Sec 03 T10S R22E 1500 FSL 2008 FWL

BHL Sec 03 T10S R22E 0913 FSL 2150 FWL

43-047-52934 NBU 1022-3K1CS Sec 03 T10S R22E 1493 FSL 1969 FWL

BHL Sec 03 T10S R22E 2047 FSL 2147 FWL

43-047-52935 NBU 1022-3N4CS Sec 03 T10S R22E 1496 FSL 1988 FWL

BHL Sec 03 T10S R22E 0287 FSL 2143 FWL

43-047-52941 NBU 1022-3N1BS Sec 03 T10S R22E 1501 FSL 2018 FWL

BHL Sec 03 T10S R22E 1244 FSL 2150 FWL

43-047-52942 NBU 1022-3K4BS Sec 03 T10S R22E 1494 FSL 1978 FWL

BHL Sec 03 T10S R22E 1760 FSL 2154 FWL

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API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

#### WELL PAD - NBU 1022-3E

43-047-52920 NBU 1022-3E4CS Sec 03 T10S R22E 1960 FNL 0490 FWL BHL Sec 03 T10S R22E 2324 FNL 0667 FWL

43-047-52922 NBU 1022-3D4CS Sec 03 T10S R22E 1939 FNL 0511 FWL

BHL Sec 03 T10S R22E 1245 FNL 0826 FWL

43-047-52929 NBU 1022-3E4BS Sec 03 T10S R22E 1953 FNL 0497 FWL

BHL Sec 03 T10S R22E 2057 FNL 0841 FWL

43-047-52930 NBU 1022-3E2AS Sec 03 T10S R22E 1946 FNL 0504 FWL

BHL Sec 03 T10S R22E 1676 FNL 0625 FWL

#### WELL PAD - NBU 1022-3C

43-047-52924 NBU 1022-3C1BS Sec 03 T10S R22E 0810 FNL 1682 FWL BHL Sec 03 T10S R22E 0166 FNL 2110 FWL

DIE 000 00 1100 NOOD 0100 1ND D110 1N

43-047-52931 NBU 1022-3D1CS Sec 03 T10S R22E 0817 FNL 1664 FWL

BHL Sec 03 T10S R22E 0581 FNL 0826 FWL

43-047-52937 NBU 1022-3C1CS Sec 03 T10S R22E 0806 FNL 1692 FWL

BHL Sec 03 T10S R22E 0619 FNL 2130 FWL

43-047-52946 NBU 1022-3D1BS Sec 03 T10S R22E 0813 FNL 1673 FWL

BHL Sec 03 T10S R22E 0224 FNL 0833 FWL

#### WELL PAD - NBU 1022-3B

43-047-52926 NBU 1022-3B4CS Sec 03 T10S R22E 0998 FNL 1724 FEL

BHL Sec 03 T10S R22E 1241 FNL 1822 FEL

43-047-52927 NBU 1022-3B1CS Sec 03 T10S R22E 0988 FNL 1706 FEL

BHL Sec 03 T10S R22E 0578 FNL 1822 FEL

#### WELL PAD - NBU 1022-30

43-047-52932 NBU 1022-3P1CS Sec 03 T10S R22E 0699 FSL 2072 FEL

BHL Sec 03 T10S R22E 0909 FSL 0494 FEL

43-047-52936 NBU 1022-304CS Sec 03 T10S R22E 0660 FSL 2065 FEL

BHL Sec 03 T10S R22E 0106 FSL 1825 FEL

43-047-52939 NBU 1022-3P4CS Sec 03 T10S R22E 0680 FSL 2069 FEL

BHL Sec 03 T10S R22E 0256 FSL 0500 FEL

43-047-52940 NBU 1022-301CS Sec 03 T10S R22E 0709 FSL 2073 FEL

BHL Sec 03 T10S R22E 0746 FSL 1819 FEL

#### WELL PAD - NBU 1022-3M

43-047-52933 NBU 1022-3M4CS Sec 03 T10S R22E 0607 FSL 0615 FWL

BHL Sec 03 T10S R22E 0163 FSL 0812 FWL

#### WELL PAD - NBU 1022-3L

43-047-52943 NBU 1022-3L1AS Sec 03 T10S R22E 2086 FSL 0607 FWL

BHL Sec 03 T10S R22E 2411 FSL 0825 FWL

43-047-52944 NBU 1022-3L1BS Sec 03 T10S R22E 2086 FSL 0597 FWL

BHL Sec 03 T10S R22E 2644 FSL 0665 FWL

Page 3

API Well Number: 43047529070000

Page 4

This office has no objection to permitting the wells at this time.

Michael L. Coulthard

Digitally signed by Michael L. Coulthard

Div. cn=Michael L. Coulthard, o=Bureau of Land Management,
ousBranch of Minerals, email=Michael\_Coulthard@blm.gov, c=US
Date: 2012.07.16 13:26:05-06:00'

bcc: File - Natural Buttes Unit
 Division of Oil Gas and Mining
 Central Files
 Agr. Sec. Chron
 Fluid Chron

MCoulthard:mc:7-16-12

RECEIVED: July 18, 2012

API Well Number: 43047529070000

#### **WORKSHEET** APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 7/6/2012 API NO. ASSIGNED: 43047529070000

WELL NAME: NBU 1022-3G1CS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) PHONE NUMBER: 720 929-6086

**CONTACT:** Gina Becker

PROPOSED LOCATION: SWNE 03 100S 220E **Permit Tech Review:** 

> SURFACE: 2153 FNL 2105 FEL **Engineering Review:**

> **BOTTOM:** 1903 FNL 1821 FEL **Geology Review:**

**COUNTY: UINTAH** 

**LATITUDE**: 39.97923 LONGITUDE: -109.42416 **UTM SURF EASTINGS: 634557.00** NORTHINGS: 4426641.00

FIELD NAME: NATURAL BUTTES LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-01191A PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 1 - Federal **COALBED METHANE: NO** 

**RECEIVED AND/OR REVIEWED: LOCATION AND SITING:** 

✓ PLAT R649-2-3.

Unit: NATURAL BUTTES Bond: FEDERAL - WYB000291

**Potash** R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

Oil Shale 190-13 **Drilling Unit** 

Board Cause No: Cause 173-14 Water Permit: 43-8496

Effective Date: 12/2/1999 **RDCC Review:** 

Siting: Suspends General Siting **Fee Surface Agreement** 

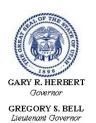
✓ Intent to Commingle R649-3-11. Directional Drill

**Commingling Approved** 

Comments: Presite Completed

Stipulations:

3 - Commingling - ddoucet 4 - Federal Approval - dmason 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason



### State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

#### Permit To Drill

\*\*\*\*\*\*

Well Name: NBU 1022-3G1CS API Well Number: 43047529070000 Lease Number: UTU-01191A Surface Owner: FEDERAL

**Approval Date:** 8/21/2012

#### Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

#### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### **Commingle:**

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

#### Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
  - Requests to Change Plans (Form 9) due prior to implementation
  - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
  - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

SUBMIT AS EMAIL

### BLM - Vernal Field Office - Notification Form

Oper	rator KERR-McGEE OIL & GAS	<u> </u>	e/# <u>BUC</u>	KET RIG
Subr	mitted By <u>L. Urban</u> P	hone Numl	ber 720.	929.6501
	Name/Number NBU 1022-3G			
	Qtr <u>SW/NE</u> Section 037		os R	ange 22E
_	se Serial Number UTU-01191-A	-		<u> </u>
	Number 4304752907			
-	<u>d Notice</u> – Spud is the initial s	spudding o	f the wel	l, not drilling
out t	below a casing string.			
	Date/Time <u>1/7/2013</u>	09:00 HRS	AM 🗸	РМ
<u>Casir</u>	<u>ng</u> – Please report time casin	ıg run start	s, not ce	menting
	Surface Casing			
	Intermediate Casing			
	Production Casing			
	Liner			
	Other			
•	Date/Time 1/25/2013	08:00 HRS	<b>ДМ</b> 🗾	рм 🗍
	<u> </u>	00.00 11110	/ (	
BOPE	E			
	Initial BOPE test at surface of	casing poin	t	
	BOPE test at intermediate ca	asing point		
	30 day BOPE test			
	Other			
	Date/Time		AM 🗌	РМ 🗌
Rema	arks estimated date and time. Please	E CONTACT KENNY	GATHINGS A	.T
	88.0986 OR LOVEL YOUNG AT 435.781.7051			

Sundry Number: 33818 API Well Number: 43047529070000

	STATE OF UTAH		FORM 9
I	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191A
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 1022-3G1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047529070000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 8021	<b>PHONE NUMBER:</b> 7 3779 720 929-6	9. FIELD and POOL or WILDCAT: 5NIATUERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2153 FNL 2105 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SWNE Section: (	HIP, RANGE, MERIDIAN: 03 Township: 10.0S Range: 22.0E Meri	dian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
·	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
✓ DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date: 1/9/2013			
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
MIRU TRIPLE A BU RAN 14" 36.7# SC	COMPLETED OPERATIONS. Clearly show CKET RIG. DRILLED 20" CON HEDULE 10 CONDUCTOR P X. SPUD WELL LOCATION O 09:30 HRS.	NDUCTOR HOLE TO 40'. IPE. CEMENT WITH 28	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 16, 2013
NAME (DI EACE ETTE		oso Itizi s	
NAME (PLEASE PRINT) Lindsey Frazier	<b>PHONE NUM!</b> 720 929-6857	BER TITLE Regulatory Analyst II	
SIGNATURE N/A		DATE 1/15/2013	

#### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

#### **ENTITY ACTION FORM**

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

city DENVER

state CO

Phone Number: (720) 929-6857

#### Well 1

API Number	Well	Well Name		QQ Sec Twp		Rng	County	
4304752903	NBU 1022-3J1BS		4304752903 NBU 1022-3J1BS	SWNE	SWNE 3 10S		22E	UINTAH
Action Code	Current Entity Number	New Entity Number	S	Spud Date		l .	ity Assignment iffective Date	
B	99999	99999 1-900		1/8/2013		1/	31/2013	

zip 80217

Comments:

MIRU TRIPLE A BUCKET RIG.

SPUD WELL LOCATION ON JANUARY 8, 2013 AT 16:30 HRS. WSMVD

bhl

NWSE

Well 2

API Number	Well N	lame	QQ	Sec	Twp	Rng	County
4304752907	NBU 1022-3G1CS		SWNE	SWNE 3 10S		22E	UINTAH
Action Code	Current Entity Number	New Entity Number	s	Spud Date			ity Assignment  ffective Date
3	99999	1900		1/9/2013		11	31/2013

MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON JANUARY 9, 2013 AT 09:30 HRS.

SWNE

#### Well 3

API Number	Well I	Name	QQ	Sec	Twp	Rng	County		
Action Code	Current Entity Number	New Entity Spud Date Number		Spud Date				Entity Assignm Effective Date	
Comments:									

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- **B** Add new well to existing entity (group or unit well)
- Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new trity ED
- Other (Explain in 'comments' section)

JAN 15 2013

Lindsey Frazier

Name (Please Print)

Signature

**REGULATORY ANALYST II** 

1/15/2013

Title

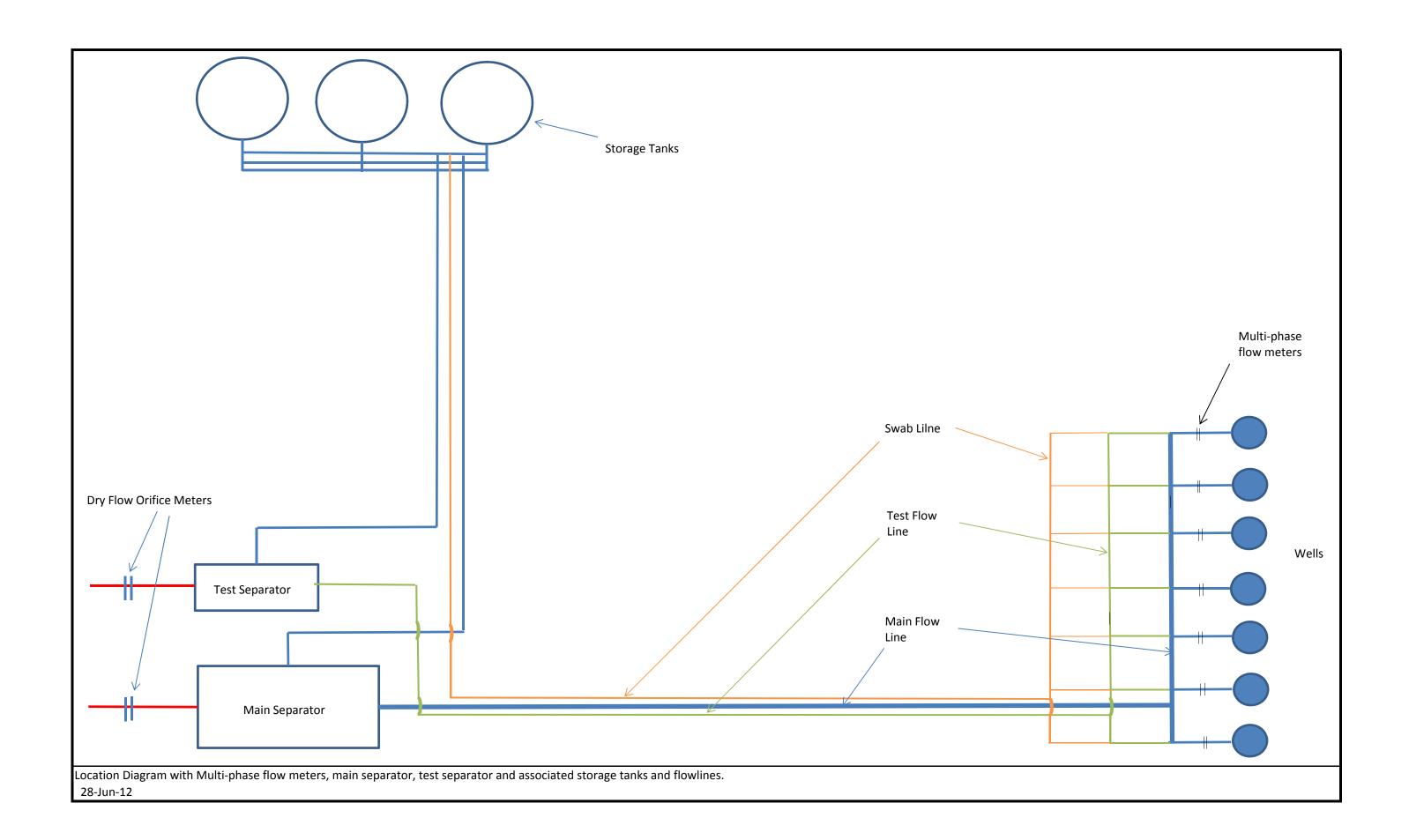
Date

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES		FORM 9  5.LEASE DESIGNATION AND SERIAL NUMBER:
	DIVISION OF OIL, GAS, AND MININ	IG	UTU-01191A
	RY NOTICES AND REPORTS OF		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for pro current bottom-hole depth, FOR PERMIT TO DRILL form	oposals to drill new wells, significantly deoreenter plugged wells, or to drill horizontant for such proposals.	epen existing wells below Il laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 1022-3G1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		<b>9. API NUMBER:</b> 43047529070000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18tl	PF h Street, Suite 600, Denver, CO, 80217 3	HONE NUMBER: 779 720 929-6	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2153 FNL 2105 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 03 Township: 10.0S Range: 22.0E Meridiar	n: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
Kerr-McGee respe produced from the the individual measurement at ea	COMPLETED OPERATIONS. Clearly show all postfully requests the option to meassociated well pad and allocated wells on the pad based upon a well and periodic well tests.	neasure the total gas ate gas production to multi-phase flow s. The following wells	CASING REPAIR  CHANGE WELL NAME  CONVERT WELL TYPE  NEW CONSTRUCTION  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  TEMPORARY ABANDON  WATER DISPOSAL  APD EXTENSION  OTHER: Multi-phase meter  Depths, volumes, etc.  Approved by the Utah Division of Oil, Gas and Mining  Date: February 26, 2013
NBU 1022-3G1CS	022-03G pad: - NBU 1022-3G , 4304752907 - NBU 1022-3G 304752903 - NBU 1022-3J1CS see the attached.	4CS, 4304750172 -	By: Dork Quit
NAME (PLEASE PRINT) Laura Abrams	<b>PHONE NUMBER</b> 720 929-6356	TITLE Regulatory Analyst II	
SIGNATURE N/A		DATE 2/13/2013	

Sundry Number: 34708 API Well Number: 43047529070000

The fluids from each well will be measured utilizing a multi-phase flow meter and then directed to a common separator for all wells on the pad. Liquids would be directed to tanks and the gas from all the wells measured through a calibrated orifice meter. The volume of gas measured through this meter, plus fuel gas consumed on location, will be the volume of gas that is produced from the pad. Gas volume for each individual well on the pad will be based on an allocation formula utilizing the total pad volume measured plus fuel gas consumed and the calculated volume from each well utilizing the multi-phase flow meters. The multi-phase flow meter volume calculation will be calibrated by periodic individual well tests.

RECEIVED: Feb. 13, 2013



# RECEVE

**UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT FEB 2 7 2012

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

5. Lease Serial No. UTU01191A

APPLICATION FOR PERMIT	to drill bankenteernal Uto	d. If Indian, Allottee or Tribe	Name
1a. Type of Work: ☑ DRILL ☐ REENTER		7. If Unit or CA Agreement, 1 UTU63047A	Name and No.
lb. Type of Well: ☐ Oil Well     Gas Well ☐ Oth	ner ☐ Single Zone ☑ Multiple Zone	8. Lease Name and Well No. NBU 1022-3G1CS	
2. Name of Operator Contact: KERR-MCGEE OIL & GAS ONSHORMAII: GINA.BI	GINA T BECKER ECKER@ANADARKO.COM	9. API Well No. 43-047-57-90	77
3a. Address P.O. BOX 173779 DENVER, CO 80202-3779	3b. Phone No. (include area code) Ph: 720-929-6086 Fx: 720-929-7086	10. Field and Pool, or Explora NATURAL BUTTES	atory
4. Location of Well (Report location clearly and in accorda	nce with any State requirements.*)	11. Sec., T., R., M., or Blk. ar	nd Survey or Area
At surface SWNE 2153FNL 2105FEL	39.979357 N Lat, 109.424193 W Lon	Sec 3 T10S R22E Me	r SLB
At proposed prod. zone SWNE 1903FNL 1821FEL	39.980043 N Lat, 109.423181 W Lon		
14. Distance in miles and direction from nearest town or post of APPROXIMATELY 58 MILES SOUTHEAST OF	office* VERNAL, UTAH	12. County or Parish UINTAH	13. State UT
<ol> <li>Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 813</li> </ol>	16. No. of Acres in Lease 1363.00	17. Spacing Unit dedicated to	this well
<ol> <li>Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.</li> </ol>	19. Proposed Depth	20. BLM/BIA Bond No. on fi	le
380	8737 MD 8707 TVD	WYB000291	
21. Elevations (Show whether DF, KB, RT, GL, etc. 4986 GL	22. Approximate date work will start 08/08/2012	23. Estimated duration 60-90 DAYS	
	24. Attachments		
The following, completed in accordance with the requirements of	Onshore Oil and Gas Order No. 1, shall be attached to t	this form:	
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Systems Supposed to the Supposed Supposed</li></ol>	Item 20 above). 5. Operator certification	ons unless covered by an existing	`
25. Signature (Electronic Submission)	Name (Printed/Typed) GINA T BECKER Ph: 720-929-6086		Date 02/15/2012
Title REGULATORY ANALYST II			
Approved by (Signature)	Name (Printed/Typed) Jerry Kenczka		$\mathbf{AUG}$ 0 2 2012
Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE		
Application approval does not warrant or certify the applicant ho operations thereon.  Conditions of approval, if any, are attached.	lds legal or equitable title to those rights in the subject le		icant to conduct
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, n States any false, fictitious or fraudulent statements or representat	hake it a crime for any person knowingly and willfully to	make to any department or ager	ncy of the United
	one as to any manor within its junction.	RE	CEIVED

Additional Operator Remarks (see next page)

Electronic Submission #131036 verified by the BLM Well Information System For KERR-MCGEE OIL & GAS ONSHORE, sent to the Vernal

DIV. OF OIL, GAS & MINING

AUG 1 3 2012

**NOTICE OF APPROVAL** 

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

ind introlin MCVC WHING LG



# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE

VERNAL FIELD OFFICE
VERNAL, UT 84078

(435) 781-4400



#### CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No: API No: Kerr-McGee Oil & Gas Onshore, LP

170 South 500 East

**NBU 1022-3G1CS** 

43-047-52907

Location:

SWNE Sec. 3, T10S, R22E

Lease No: Agreement:

UTU-01191A

Natural Buttes

**OFFICE NUMBER:** 

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

# A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

#### **NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to:  blm_ut_vn_opreport@blm.gov
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	_	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)		Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 2 Well: NBU 1022-3G1CS 7/19/2012

# SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horse power must not emit more than 2 grams of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 grams of NOx per horsepower-hour.
- The following will be used as standard operating procedures: Green completion or controlled VOC
  emissions methods with 90% efficiency for Oil or Gas Atmospheric Storage Tanks, VOC Venting
  controls or flaring, Glycol Dehydration and Amine Unites, Well Completion, Re-Completion, Venting,
  and Planned Blowdown Emissions.
- All reclamation activities will comply with the Green River Reclamation Guidelines
- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established
- Noxious and invasive weeds will be controlled by the proponent throughout the area of project disturbance.
- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an
  integrated pest management program is applicable, coordination has been undertaken with the
  state and local management program (if existing). A copy of the pest management plan will be
  submitted for each project.
- A pesticide use proposal (PUP) will be obtained for the project, by the proponent if applicable.
- A permitted paleontologist is to be present to monitor construction at all well pads during all surface disturbing actives: examples include the following; building of the well pad, access road, and pipelines.

To maintain compliance with current cactus survey protocols, the following measures will be required

- 1. If construction does not occur within 4 years of the original survey date, new 100% clearance surveys will be required.
- 2. Prior to construction within 4 years of the original survey date, a spot check survey will be required during the year of construction. KMG and their respective 3<sup>rd</sup> party surveyor will refer to the current *Sclerocactus* Spot Check Survey Methods, to determine site specific survey distances and intensity levels.
- 3. Spot check reports will be reported to the BLM and the US Fish and Wildlife Service.
- 4. Construction will not commence until written approval is received from the BLM

Page 3 of 3 Well: NBU 1022-3G1CS 7/19/2012

Discovery Stipulation: Reinitiation of section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for Uinta Basin hookless cactus is anticipated as a result of project activities.

- Construction or drilling is not allowed from January 1 August 31 on the NBU 1022-30 pad to minimize impacts during golden eagle nesting.
- If it is anticipated that construction or drilling will occur during the given timing restriction, a BLM or qualified biologist shall be notified to conduct surveys for raptors. Depending upon the results of the surveys, permission to proceed may or may not be granted by the Authorized Officer.
- The best method to avoid entrainment is to pump from an off-channel location one that does not connect to the river during high spring flows. An infiltration gallery constructed in a BLM and Service approved location is best.
- If the pump head is located in the river channel where larval fish are known to occur, the following measures apply:
  - a. do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate larval fishes;
  - b. limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to August 31); and
  - c. limit the amount of pumping, to the greatest extent possible, during the pre-dawn hours as larval drift studies indicate that this is a period of greatest daily activity.
- Screen all pump intakes with 3/32 inch mesh material.
- Approach velocities for intake structures will follow the National Marine Fisheries Service's
  document "Fish Screening Criteria for Anadromous Salmonids". For projects with an in-stream
  intake that operate in stream reaches where larval fish may be present, the approach velocity will
  not exceed 0.33 feet per second (ft/s).
- Report any fish impinged on the intake screen to the Service (801.975.3330) and the Utah Division of Wildlife Resources:

Northeastern Region 152 East 100 North, Vernal, UT 84078 Phone: (435) 781-9453

Kerr McGee can only use the following water source:
 Permit # 49-2307 JD Field Services Green River-Section 15, T2N, R22E

Page 4 of 4 Well: NBU 1022-3G1CS 7/19/2012

# DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

#### SITE SPECIFIC DOWNHOLE COAs:

Gamma ray Log shall be run from Total Depth to Surface.

#### Variances Granted:

#### Air Drilling

- Properly lubricated and maintained rotating head. Variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore. Variance granted for blooie line discharge to be 45' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressors located 40'from the well bore.
- In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for the kill medium and will utilize a skid pump near the reserve pit to supply the water to the well bore if necessary.
- Automatic igniter. Variance granted for igniter due to there being no productive formations encountered while air drilling.
- FIT Test. Variance granted due to well-known geology and the problems that can occur with the FIT test.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

#### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily
  drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order
  No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a
  test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's
  log.

Page 5 of 5 Well: NBU 1022-3G1CS 7/19/2012

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is
  encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal
  Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
   Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to BLM\_UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 6 of 6 Well: NBU 1022-3G1CS 7/19/2012

#### **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at <u>www.ONRR.gov</u>.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written communication
  and must be received in this office by not later than the fifth business day following the date on
  which the well is placed on production. The notification shall provide, as a minimum, the following
  informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - o The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs,

Page 7 of 7 Well: NBU 1022-3G1CS 7/19/2012

core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
  lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a
  suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be
  obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior approval
  of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
  approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
  of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

### State of Utah - Notification Form

Operator <u>Anadarko Petroleum</u> Rig Name/# <u>PIONEER 54</u>
Submitted By <u>KENNY MORRIS</u> Phone Number <u>435-790-2921</u>
Well Name/Number <u>NBU 1022-3G1CS</u>
Qtr/Qtr <u>SE/NE</u> Section <u>3</u> Township <u>10S</u> Range 22E
Lease Serial Number <u>UTU-01191A</u>
API Number 4304752907

<u>Casing</u> – Time casing run starts, not cementing ti	mes.
Production Casing Other	
Date/Time <u>3/15/2013</u> <u>08:00</u> AM ⊠ I	PM
BOPE Initial BOPE test at surface casing point Other  Date/Time AM PM	
Rig Move Location To:  Date/Time AM  PM  PM	RECEIVED  MAR 1 3 2013  DIV. OF OIL, GAS & MINING

Remarks NBU 1022-O3G PAD WELL 4 OF 5

Sundry Number: 37421 API Well Number: 43047529070000

	STATE OF UTAH		FORM 9	
I	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191A	
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.	deepen existing wells below ontal laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 1022-3G1CS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047529070000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 8021	<b>PHONE NUMBER:</b> 17 3779 720 929-	9. FIELD and POOL or WILDCAT: 65NATERAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2153 FNL 2105 FEL			COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SWNE Section: 0	HP, RANGE, MERIDIAN: 03 Township: 10.0S Range: 22.0E Meri	idian: S	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
	ACIDIZE	ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION	
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK	
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL	
DRILLING REPORT     Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION	
5/3/2013	WILDCAT WELL DETERMINATION	OTHER	OTHER:	
	COMPLETED OPERATIONS. Clearly show	-	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY May 09, 2013	
NAME (PLEASE PRINT) Teena Paulo	PHONE NUM			
SIGNATURE	720 929-6236	DATE Staff Regulatory Specialist	Staff Regulatory Specialist	
SIGNATURE   N/A		5/3/2013		

RECEIVED: May. 03, 2013

Sundry Number: 37770 API Well Number: 43047529070000

	STATE OF UTAH		FORM 9
[	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01191A
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 1022-3G1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047529070000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 8021	<b>PHONE NUMBER:</b> 720 929-6	9. FIELD and POOL or WILDCAT: 5MATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2153 FNL 2105 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 03 Township: 10.0S Range: 22.0E Merio	dian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
5/7/2013	WILDCAT WELL DETERMINATION	OTHER	OTHER:
THE SUBJECT WELL	COMPLETED OPERATIONS. Clearly show.  WAS PLACED ON PRODUC' WELL HISTORY WILL BE SUBN COMPLETION REPORT.	TION ON 05/07/2013. THE	• • •
NAME (PLEASE PRINT) Teena Paulo	PHONE NUME	BER TITLE Staff Regulatory Specialist	
SIGNATURE	720 929-6236	DATE	
N/A		5/9/2013	

RECEIVED: May. 09, 2013

Form 3160-4 (August 2007)			DEPAR BUREAU	TMEN	TO T		NTE								OM	B No. 1	PROVED 004-0137 y 31, 2010
	WELL (	COMPL	LETION C	R RE	COI	MPLE	TIO	N RE	PORT	AND I	_OG		5		ase Serial I		
1a. Type of		Oil Well	_			•	Ot							5. If	Indian, All	ottee o	r Tribe Name
b. Type of	f Completion	_	New Well er	□ Wo	rk Ov	er [	] Dec	epen —	☐ Plu	g Back	☐ Dif	f. Re			nit or CA A		ent Name and No.
2. Name of KERR	Operator	-&GAS C	ONSHORE E	-∰Mail: t	eena	Contact	: TE	ENA P	AULO				8		ase Name		
	PO BOX <sup>2</sup>	173779						3a.	Phone N	o. (includ	e area co	de)	ç	e. Al	PI Well No		42.047.52007
4. Location	DENVER,		ion clearly an	nd in acc	cordan	nce with	Fede		720-92					10. F	ield and Po	ool, or	43-047-52907 Exploratory
			NL 2105FEL					•		,			L	N	ATURAL	BÚTTI	ES ,
At top p	orod interval i	eported b	elow SWI	NE 189	5FNL	. 1833F	EL						Ľ				Block and Survey 0S R22E Mer SLB
At total	depth SW	NE 1887	'FNL 1810F	EL											County or P INTAH	arish	13. State UT
14. Date S <sub>1</sub> 01/09/2	pudded 2013			ate T.D. /15/201		hed			□ D &	e Complet : A	ed Ready t	o Pro		17. E		DF, KI 01 KB	B, RT, GL)*
18. Total D	Depth:	MD TVD	8765 8735		19.	Plug Ba	ck T.	D.:	MD TVD	87	706 675		20. Depth	Brio	dge Plug Se		MD TVD
21. Type E	lectric & Oth		nical Logs R -/GR/CCL/TI	un (Sub EMP	mit co	opy of ea	ich)		1 V D	O(	22. W W	as D	ell cored? ST run?		<b>⊠</b> No	□ Yes	s (Submit analysis) s (Submit analysis)
22 Casina a	nd Linas Daar	and /Dam	ort all strings	4							Di	recti	onal Surve	ey?	□ No	<b>⊠</b> Yes	s (Submit analysis)
				To		Botto	m	Stage (	Cemente	r No. o	of Sks. &	:	Slurry V	ol.	C	r*	A D. 11 - d
Hole Size	Size/G		Wt. (#/ft.)	(MI		(ME	_	Do	epth	Type	of Cemei	_	(BBL)	)	Cement 7	ı op*	Amount Pulled
11.000	+	000 STL 25 IJ-55	36.7 28.0	<del>                                     </del>	0 19	2	40 336					28 900				0	
7.875		500 I-80		<del>                                     </del>	19		751				1575					1010	
												$\dashv$					
24. Tubing	Record		<u> </u>							1							l
	Depth Set (M	MD) P	acker Depth	(MD)	Siz	ze l	Depth	Set (M	(D)	Packer De	pth (MD	)	Size	De	pth Set (M	D)	Packer Depth (MD)
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	ng Intervals		Т	Т	D	**	26.		tion Rec			1	C:	Τ,	T- TT-1	ı	Don't Chatan
A)	ormation WASA	ATCH	Тор	5574	Во	6588		Pe	errorated	Interval 5574 T	O 6588		Size 0.360	$\overline{}$	No. Holes 54	OPE	Perf. Status
B)	MESAVE			6988		8681					O 8681	_	0.360			OPE	
C)																	
D)																	
	•		ment Squeeze	e, Etc.													
	Depth Interva		OO 4 DUMP O	, 00F DF	1 0 01	101/ 110/	200	45.005		mount an			iterial				
	55	74 TO 8	681 PUMP S	9,805 BE	3LS SI	LICK HZ	J & 2	15,935	LBS 30/8	50 OTTAW	A SAND						
28. Product	ion - Interval	A															
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL		Gas MCF		ater BL	Oil C Corr.	ravity	Ga	s avity	Pr	oducti	on Method		
05/07/2013	I	24		0.0		2973.0	- 1	0.0	Con.	All	01	avity			FLOV	VS FR	OM WELL
Choke Size 20/64	Tbg. Press. Flwg. 1807 SI	Csg. Press. 2189.0	24 Hr. Rate	Oil BBL		Gas MCF 2973		ater BL 0	Gas:0 Ratio		We	ell Stat					
	tion - Interva				1	2313		0			I	1 0	···				
Date First	Test	Hours	Test	Oil		Gas	W	/ater	Oil C	ravity	Ga	s .	Pr	oducti	on Method		

Csg. Press.

24 Hr.

Rate

Tbg. Press. Flwg.

Choke

Size

Oil

BBL

Gas MCF

Gas:Oil

Ratio

Well Status

Water BBL

32. Additional remarks (include plugging procedure): The first 210 ft of the surface hole was drilled with a 12 1/4 inch bit. The remainder of the surface hole was drilled with an 11 inch bit. DQX csg was run from surface to 5015 ft; LTC csg was run from 5015 ft. to 8751 ft. Attached is the chronological well history, perforation report and final survey.

22	C:1-	11	l attachme	4
		enciosed	і апаспте	mrs.

1. Electrical/Mechanical Logs (1 full set req'd.)

2. Geologic Report

3. DST Report

4. Directional Survey

5. Sundry Notice for plugging and cement verification

6. Core Analysis

7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #209272 Verified by the BLM Well Information System. For KERR MCGEE OIL&GAS ONSHORE,LP, sent to the Vernal

Name (please print)	TEENA PAULO	Title STAFF REGULATORY SPECIALIST
Ciamatuma	(Electronic Submission)	Date 06/03/2013
Signature	(Electronic Submission)	Date 00/03/2013

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.

						KIES RI					
				Opera	tion S	umma	ary Report				
	2-3G1CS GREEN				Spud Date: 2/4/2013						
Project: UTAH-I	Site: NBL	J 1022-03	G PAD			Rig Name No: PROPETRO 12/12, PIONEER 54/54					
Event: DRILLIN	G		Start Date	e: 1/16/20	13			End Date: 3/18/2013			
Active Datum: F Level)	RKB @5,001.00usft (a	bove Mean S	ea	UWI: SV	V/NE/0/1	0/S/22/E/	3/0/0/26/PM/N/21	153/E/0/2105/0/0			
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
2/4/2013	12:30 - 15:00	2.50	MIRU	01	С	Р		RIG UP DIVERTER & FLOWLINE / RIG UP OVER HOLE / SET CATWALK & PIPE RACKS, HOOK UP & PRIME PUMP			
	15:00 - 15:30	0.50	DRLSUR	06	Α	Р		PICK UP 12.25" BIT & 8" MUD MOTOR & TIH			
	15:30 - 17:00	1.50	DRLSUR	02	В	Р		DRILL 12.25"SURFACE HOLE F/44'-210'  ROP= 166' @ 110 FPH  WOB= 5-15K.  RPM= TOP DRIVE~55 / MOTOR ~83 /TOTAL  RPM~138  GPM= 491 @ 120 SPM  SPP ON/OFF= 800/600  UP/DN/ROT = 22/20/20  NOV ON LINE			
	17:00 - 17:30	0.50	DRLSUR	06	Α	Р		TOOH & LAY DOWN 12.25" BIT			
	17:30 - 19:00	1.50	DRLSUR	06	Α	Р		PICK UP 11" BIT & DIR. TOOLS, SCRIBE & TIH			
	19:00 - 0:00	5.00	DRLSUR	02	В	P		DRILL 11" SURFACE HOLE F/210'-T/860'  ROP= 650' @ 130 FPH  WOB= 18-22K.  RPM= TOP DRIVE~50 / MOTOR ~83 / TOTAL RPM~  133  GPM= 491 @ 120 SPM  SPP ON/OFF= 920/770  UP/DOWN/ ROT= 57/52/55K.~DRAG= 2K  TORQUE ON/OFF = 3000/1100  NOV ON LINE  MW= 8.4  NO HOLE ISSUES  SLID 73' = 9%  9' ABOVE AND 0.6' RIGHT OF LINE			
2/5/2013	0:00 - 5:30	5.50	DRLSUR	02	В	P		DRILL 11" SURFACE HOLE F/860' - T/1,320' ROP= 460' @ 83.6 FPH WOB= 18-22K. RPM= TOP DRIVE~50 / MOTOR ~83 / TOTAL RPM~ 133 GPM= 491 @ 120 SPM SPP ON/OFF= 1020/820 UP/DOWN/ ROT= 65/52/60K.~DRAG= 5K TORQUE ON/OFF = 3000/1200 NOV ON LINE MW= 8.4 NO HOLE ISSUES SLID 35' = 8% 10' ABOVE AND 2' RIGHT OF LINE			

5/23/2013 10:39:49AM 1

#### API Well Number: 43047529070000 US ROCKIES REGION **Operation Summary Report** Spud Date: 2/4/2013 Well: NBU 1022-3G1CS GREEN Project: UTAH-UINTAH Site: NBU 1022-03G PAD Rig Name No: PROPETRO 12/12, PIONEER 54/54 **Event: DRILLING** End Date: 3/18/2013 Start Date: 1/16/2013 UWI: SW/NE/0/10/S/22/E/3/0/0/26/PM/N/2153/E/0/2105/0/0 Active Datum: RKB @5,001.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 5:30 - 12:00 6.50 DRLSUR 02 В Ρ DRILL 11" SURFACE HOLE F/1,320' - T/1,880' ROP= 560' @ 86 FPH WOB= 18-22K. RPM= TOP DRIVE~50 / MOTOR ~83 / TOTAL RPM~ 133 GPM= 491 @ 120 SPM SPP ON/OFF= 1,250/1,000 PSI UP/DOWN/ ROT= 78/60/68K.~DRAG= 10K TORQUE ON/OFF = 3000/1300 NOV ON LINE MW= 8.4 NO HOLE ISSUES SLID 170' = 16% 7' ABOVE AND 1' RIGHT OF LINE 12:00 - 17:30 5.50 **DRLSUR** DRILL 11" SURFACE HOLE F/1,880' - T/2,351' ROP= 471' @ 85.6 FPH WOB= 18-22K. RPM= TOP DRIVE~50 / MOTOR ~83 / TOTAL RPM~ 133 GPM= 491 @ 120 SPM SPP ON/OFF= 1,300/1,100 UP/DOWN/ ROT= 85/65/72K.~DRAG= 13K TORQUE ON/OFF = 3,000/1,350 NOV ON LINE MW= 8.4 NO HOLE ISSUES SLID 50' = 16.47% 6' ABOVE AND 2' RIGHT OF LINE 17:30 - 19:30 **DRLSUR** 2.00 05 С CIRCULATE & CONDITION HOLE F/ 8-5/8" CSG (FILL 3.50 19:30 - 23:00 DRLSUR 06 Р LAY DOWN DRILL STRING & DIR. TOOLS Α 23:00 - 0:00 1.00 **DRLSUR** Ρ 12 Α PJSM FOR TIH CSG / MOVE PIPE RACKS & CATWALK / MOVE CSG INTO POSITION 2/6/2013 0:00 - 2:30 2.50 Ρ **CSGSUR** 12 С RUN 53 JTS, 8-5/8", 28#, J-55, LT&C CSG. / SHOE SET @ 2,320.9' & BAFFLE @ 2,275.6' 2:30 - 3:00 **CSGSUR** Ρ 0.50 12 Ε RUN 200' OF 1" DOWN BACKSIDE, RIG DOWN & MOVE OFF WELL / INSTALL CMT. HEAD & LOAD PLUG / PRE JOB SAFETY MEETING FOR CEMENTING

5/23/2013 10:39:49AM 2

#### API Well Number: 43047529070000 **US ROCKIES REGION Operation Summary Report** Well: NBU 1022-3G1CS GREEN Spud Date: 2/4/2013 Site: NBU 1022-03G PAD Project: UTAH-UINTAH Rig Name No: PROPETRO 12/12, PIONEER 54/54 **Event: DRILLING** End Date: 3/18/2013 Start Date: 1/16/2013 UWI: SW/NE/0/10/S/22/E/3/0/0/26/PM/N/2153/E/0/2105/0/0 Active Datum: RKB @5,001.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 3:00 - 6:00 3.00 DRLSUR 12 Ρ Ε HELD SM WITH PRO PETRO CEMENTERS. PRESSURE TEST LINES TO 2000 PSI. PUMP 135 BBLS OF WATER AHEAD. PUMP 20 BBLS OF 8.3# GEL WATER AHEAD. MIX AND PUMP (300 SX) 61.4 BBLS OF 15.8# 1.15 YD 5 GAL/SK PREMIUM CEMENT W/ 2% CALC. DROP PLUG ON FLY. DISPLACE W/ 143 BBLS OF H20. NO CIRC THROUGH OUT. FINAL LIFT OF 500 PSI AT 4 BBL/MIN. BUMP PLUG WITH 800 PSI FOR 5 MIN. FLOAT DIDN'T HOLD, SHUT IN UNDER PRESSURE. MIX AND PUMP (150 SX) 30.7 BBLS OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACKSIDE, NO CEMENT TO SURFACE. SHUT DOWN AND CLEAN TRUCK.. WAIT 2.0 HOURS MIX AND PUMP (150SXS OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACKSIDE NO CEMENT TO SURFACE. PUMP 3RD. TOP OUT W/150SXS, AND 4TH W/150SXS. NO CEMENT TO SURFACE. RELEASED RIG @ 06:00 3/11/2013 12:00 - 13:30 1.50 MIRU3 01 С Р SKID RIG 10' TO THE NBU 1022-3G1CS 13:30 - 14:00 0.50 PRPSPD N/LI ROPE 14 Α 14:00 - 17:30 3.50 PRPSPD 15 Α Ρ HELD SAFETY MEETING WITH RIG CREW & B & C TESTER, R/U & TEST BOPE, TEST PIPE RAMS, BLIND RAMS, INNER-OUTER BOP VALVES, CHOKE VALVES, FLOOR VALVES TO 5 MIN 250 LOW,10 MIN 5000 HIGH, ANN 5 MIN 250- 10 MIN 2500, SURFACE CASING 1500 FOR 30 MIN'S 17:30 - 18:00 INSTALL WEAR BUSHING 0.50 PRPSPD В Р 14 18:00 - 20:30 **PRPSPD** Ρ 2.50 06 Α P/U BIT, MM, DIR TOOLS & SCRIBE, TRIP IN WITH BHA, INSTALL NEW ROTATING RUBBER, TRIP IN TO TOP OF CEMENT @ 2262 20:30 - 21:30 1 00 PRPSPD Р 09 Α SLIP & CUT 90' DRILL LINE 21:30 - 23:30 2.00 Ρ **DRLPRC** 02 DRILL SHOE TRACK, BAFFLE @ 2275, SHOE @ 2320 & NEW HOLE TO 2366' 23:30 - 0:00 0.50 DRLPRC 02 CLOSED LOOP SYSTEM DRILL F/ 2366 TO 2470', 104' @ 208' PH WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.6 PPG VIS 32 TRQ ON/OFF = 6-5 K PSI ON /OFF 1700-1300 , DIFF 200-400 PU/SO/RT = 110-90-100 K SLIDE = 7' IN .08 HRS = 87.5' PH ROT= 97' IN .42 HRS = 230.9' PH NOV / 2-DEWATER .5' LEFT & 2.5' LOW HIGH OF PLAN 0 DRILL FLARE, 0 CONN FLARE

5/23/2013 10:39:49AM 3

### API Well Number: 43047529070000 US ROCKIES REGION **Operation Summary Report** Spud Date: 2/4/2013 Well: NBU 1022-3G1CS GREEN Project: UTAH-UINTAH Site: NBU 1022-03G PAD Rig Name No: PROPETRO 12/12, PIONEER 54/54 **Event: DRILLING** End Date: 3/18/2013 Start Date: 1/16/2013 UWI: SW/NE/0/10/S/22/E/3/0/0/26/PM/N/2153/E/0/2105/0/0 Active Datum: RKB @5,001.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 3/12/2013 0:00 - 8:00 8.00 **DRLPRV** 02 В Ρ CLOSED LOOP SYSTEM DRILL F/ 2470' TO 3450', 980' @ 122.5' PH WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.6 PPG VIS 32 TRQ ON/OFF = 6-5 K PSI ON /OFF 1700-1300, DIFF 200-400 PU/SO/RT = 90-70-80 K SLIDE = 60' IN .8 HRS = 75' PH ROT= 920' IN 7.2 HRS = 127.7' PH NOV / 2-DEWATER 25' N & 14' W OF TARGET CENTER 0 DRILL FLARE, 0 CONN FLARE 8:00 - 15:30 7.50 **DRLPRV** 02 CLOSED LOOP SYSTEM DRILL F/ 3450 TO 4710' @ 1260' @ 168' PH WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.6 PPG VIS 32 TRQ ON/OFF = 7-6 K PSI ON /OFF 1900-1500, DIFF 200-400 PU/SO/RT = 100-80-90 K SLIDE = 20' IN .25 HRS = 80' PH ROT= 1240' IN 7.25 HRS = 171' PH NOV / 2-DEWATER 11' N & 18' W OF TARGET CENTER 0 DRILL FLARE, 0 CONN FLARE 15:30 - 16:00 DRLPRV 0.50 Α SERVICE RIG 16:00 - 0:00 Р В 8.00 DRLPRV 02 CLOSED LOOP SYSTEM DRILL F/4710' TO 5660', 950' @ 118.7' PH WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.6 PPG VIS 32 TRQ ON/OFF = 8-7 K PSI ON /OFF 2000-1600, DIFF 200-400 PU/SO/RT = 150-120-130 K SLIDE = 22' IN .34 HRS = 64.7' PH ROT= 928' IN 7.66 HRS = 121.1' PH NOV / 2-DEWATER 8' N & 12' W OF TARGET CENTER 0 DRILL FLARE, 0 CONN FLARE

### API Well Number: 43047529070000 US ROCKIES REGION **Operation Summary Report** Spud Date: 2/4/2013 Well: NBU 1022-3G1CS GREEN Project: UTAH-UINTAH Site: NBU 1022-03G PAD Rig Name No: PROPETRO 12/12, PIONEER 54/54 Event: DRILLING End Date: 3/18/2013 Start Date: 1/16/2013 UWI: SW/NE/0/10/S/22/E/3/0/0/26/PM/N/2153/E/0/2105/0/0 Active Datum: RKB @5,001.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 3/13/2013 0:00 - 8:00 8.00 **DRLPRV** 02 В Ρ CLOSED LOOP SYSTEM DRILL F/ 5660' TO 6200=540 AVG 68 WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.6 PPG VIS 32 TRQ ON/OFF = 8-7 K PSI ON /OFF 2000-1600, DIFF 200-400 PU/SO/RT = 150-120-130 K SLIDE =30 ROT=510 NOV / 2-DEWATER 7' N 9' W OF TARGET CENTER 2 DRILL FLARE, 5 CONN FLARE 8:00 - 14:00 **DRLPRV** 6.00 02 CLOSED LOOP SYSTEM DRILL F/6200 TO 6600=400 AVG 66 WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.7 PPG VIS 32 TRQ ON/OFF = 8-7 K PSI ON /OFF 2000-1600, DIFF 200-400 PU/SO/RT = 150-120-130 K SLIDE =30 ROT=510 NOV / 2-DEWATER 4' N 6 W OF TARGET CENTER 2 DRILL FLARE, 5 CONN FLARE 14:00 - 16:00 2.00 DRLPRV 02 **CLOSED LOOP SYSTEM** DRILL F/6600 TO 6690 =90 AVG 69 WOB / 18-20 RPM TOP DRIVE 55-60 (1 PUMPS) - SPM 120 GPM 351 MW 8.6 PPG VIS 32 TRQ ON/OFF = 8-7 K PSI ON /OFF 2000-1600 . DIFF 200-400 PU/SO/RT = 155/115/140 K SLIDE =0 ROT=90 NOV / 2-DEWATER 4' N 6 W OF TARGET CENTER 2 DRILL FLARE, 8 CONN FLARE 16:00 - 16:30 Ρ 0.50 **DRLPRV** 07 **RIG SERVICE** Α

### API Well Number: 43047529070000 US ROCKIES REGION **Operation Summary Report** Spud Date: 2/4/2013 Well: NBU 1022-3G1CS GREEN Project: UTAH-UINTAH Site: NBU 1022-03G PAD Rig Name No: PROPETRO 12/12, PIONEER 54/54 Event: DRILLING End Date: 3/18/2013 Start Date: 1/16/2013 UWI: SW/NE/0/10/S/22/E/3/0/0/26/PM/N/2153/E/0/2105/0/0 Active Datum: RKB @5,001.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 16:30 - 0:00 7.50 DRLPRV 02 В Ρ CLOSED LOOP SYSTEM DRILL F/6690 TO 7134=444 AVG 55 WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.7 PPG VIS 32 TRQ ON/OFF = 8-7 K PSI ON /OFF 2000-1600, DIFF 200-400 PU/SO/RT = 150-120-130 K SLIDE =30 ROT=510 NOV / 2-CONVENTIONAL 5 N 2 W OF TARGET CENTER 2 DRILL FLARE, 8 CONN FLARE 3/14/2013 0:00 - 8:00 8.00 **DRLPRV** 02 CLOSED LOOP SYSTEM DRILL F/7134 TO 7575=441 AVG 55 WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.7 PPG VIS 32 TRQ ON/OFF = 8-7 K PSI ON /OFF 2000-1600, DIFF 200-400 PU/SO/RT = 170/120/145 K SLIDE =20 ROT=421 NOV / 2-CONVENTIONAL 8' N 2 W OF TARGET CENTER 2 DRILL FLARE, 8 CONN FLARE 8:00 - 15:00 **DRLPRV** 7.00 02 CLOSED LOOP SYSTEM DRILL F/7575 TO 7840=265 AVG 34 WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 9.7 PPG VIS 36 TRQ ON/OFF = 8-7 K PSI ON /OFF 2400/2000 . DIFF 200-400 PU/SO/RT = 185/130/155 K SLIDE =0 ROT=265 NOV / BYPASSED 15 N 1 W OF TARGET CENTER 2 DRILL FLARE, 8 CONN FLARE 15:00 - 15:30 0.50 DRLPRV Р DAILY RIG SERVICE 07 Α

#### API Well Number: 43047529070000 US ROCKIES REGION **Operation Summary Report** Well: NBU 1022-3G1CS GREEN Spud Date: 2/4/2013 Site: NBU 1022-03G PAD Project: UTAH-UINTAH Rig Name No: PROPETRO 12/12, PIONEER 54/54 **Event: DRILLING** End Date: 3/18/2013 Start Date: 1/16/2013 UWI: SW/NE/0/10/S/22/E/3/0/0/26/PM/N/2153/E/0/2105/0/0 Active Datum: RKB @5,001.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD From Operation Start-End (hr) Code (usft) 15:30 - 18:00 2.50 **DRLPRV** 02 Ρ В CLOSED LOOP SYSTEM DRILL F/7840 TO 7977=137 AVG 54 WOB / 18-23 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 180 GPM 528 MW 10.5 PPG VIS 37 TRQ ON/OFF =9/8 K PSI ON /OFF , DIFF 200-400 PU/SO/RT = 195/140/170 K SLIDE =0 ROT=137 NOV / BYPASSED 12 N 1 W OF TARGET CENTER 0 DRILL FLARE, 4 CONN FLARE 18:00 - 19:00 1.00 **DRLPRV** 80 В S CHANGE SWAB IN #1 PUMP 19:00 - 0:00 5.00 В Ρ DRLPRV 02 CLOSED LOOP SYSTEM DRILL F/7977 TO 8150=173 AVG 35 WOB / 18-25 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 180 GPM 528 MW 11.2 PPG VIS 40 TRQ ON/OFF =9/8 K PSI ON /OFF , DIFF 200-400 PU/SO/RT = 195/140/170 K SLIDE =0 ROT=173 NOV / BYPASSED 15 N 2 E OF TARGET CENTER 3 DRILL FLARE, 5 CONN FLARE ON GAS BUSTER - 14:30 0:00 3/15/2013 14.50 **DRLPRV** 02 В Ρ CLOSED LOOP SYSTEM DRILL F/8150 TO TD 8765=615 AVG 44 WOB / 18-22 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 180 GPM 528 MW 12.1 PPG VIS 44 TRQ ON/OFF =11/8 K PSI ON /OFF 2580/2300 , DIFF 200-400 PU/SO/RT = 200/150/180 K SLIDE =0 ROT=615 NOV / BYPASSED 16'N 11'E OF TARGET CENTER 0 DRILL FLARE, 10' CONN FLARE 14:30 - 15:00 0.50 DRLPRV 07 Α Ρ DAILY RIG SERVICE, CHANGE TOTCO AUTO **DRILLER PLUGS** 15:00 - 16:00 Ρ 1.00 **DRLPRV** 05 С FLOW CHECK/NO FLOW, FINAL SURVEY@ TD .53 DEG 158 AZI IS NORTH EAST OF CENTER TARGET, CIRCULATE BOTTOMS UP 16:00 - 23:00 7.00 Р DRI PRV 06 Ε WIPER TRIP TO SHOE FOR LOGS,UP REAM OUT F/4210 TO 3814' 1.5 HRS, CHECK CIRC @SHOE,WASH THRU BRIDGE @5090,WASH LAST 80' TO BTM- 20' FILL 23:00 - 0:00 1.00 **DRLPRV** Р 05 С CIRCULATE BOTTOMS UP 15' FLARE FOR 5 MINUTES, CONDITION @ 12.+/45 5%LCM FOR LOGS

#### API Well Number: 43047529070000 US ROCKIES REGION **Operation Summary Report** Well: NBU 1022-3G1CS GREEN Spud Date: 2/4/2013 Project: UTAH-UINTAH Site: NBU 1022-03G PAD Rig Name No: PROPETRO 12/12, PIONEER 54/54 **Event: DRILLING** End Date: 3/18/2013 Start Date: 1/16/2013 UWI: SW/NE/0/10/S/22/E/3/0/0/26/PM/N/2153/E/0/2105/0/0 Active Datum: RKB @5,001.00usft (above Mean Sea P/U Date Time Duration Phase Code MD From Operation Sub Start-End Code (usft) (hr) 3/16/2013 0:00 - 10:30 **EVALPR** 10.50 11 D SAFETY MEET W/SCHLUMBERGER, RIG UP RUN TRIPLE COMBO TO LOGGERS DEPTH OF 8744', REPEAT ON TOP OF WELL, ,LOG TOOL GOT STUCK ON WAY OUT AT CASING SHOE 2316-2358' TOOL 10:30 - 16:30 6.00 **EVALPR** 11 D Х WORK LOGING TOOL, CALL KENNY GATHINGS, KNIGHT OIL TOOLS, SEND HOME CASERS, WAIT ON FISH AND STRIP TOOLS 16:30 - 0:00 D 7.50 **EVALPR** 11 Х SAFETY MEET W/ HANDS & PROCEDURE, RIG UP RIG TONGS, HANG SHIVE IN DERRICK, MEASURE OUT STRETCH WTS CUT AND INSTALL ROPE SOCKETS, REHANG SHIVE HIGHER, MAKE UP OVERSHOT 3.375 GRAPPLE, START PICKING UP STNDS & SINGLE, BAILS TO SHORT FOR SOCKET RELEASE, GET LONGER BAILS ON WAY, CONTINUE TO FIGHT SOCKET RELEASE, REMOVE STABBING **GUIDE ON TOPDRIVE** 3/17/2013 0:00 - 14:00 14.00 **EVALPR** 19 D Х STRIP AND FISH,, CHANGE BAILS STRIP IN WITH OVER SHOT, CIRC THRU OVERSHOT AT 2220' ENGAGE AND WORK FISH, PULL LOG TOOL FREE FROM GRAPPLE DEPTH OF 2331', RIG DOWN SCHLUMBERGER, TRIP OUT WITH OVERSHOT LAY DOWN FISH AND KNIGHT TOOLS 14:00 - 14:30 0.50 **EVALPR** В Ρ **INSTALL WEARBUSHING** 14:30 - 16:30 2.00 **CSGPRO** Ε 06 Р CHANGE BAILS, INSTALL STABBING GUIDE, ON TOPDRIVE, CLEAN UP FLOOR RIG DOWN TONGS, 16:30 - 17:00 0.50 **CSGPRO** 07 Α Ρ DAILY RIG SERVICE 17:00 - 22:00 Ρ 5.00 **CSGPRO** 06 Ε TRIP IN WITH TRICONE BIT, CLEAN OUT RUN, CIRC @ 1100,3500,5500,7700,WELL IN GOOD SHAPE BUT **GASSY** 22:00 - 23:00 1.00 **CSGPRO** 05 С Ρ CIRCULATE BOTTOMS UP WITH 20' FLARE FOR 30 **MINUTES** 23:00 - 0:00 1.00 **CSGPRO** 06 Ε TRIP OUT WITH BIT FOR CASING RUN 3/18/2013 0:00 - 2:30 2.50 **CSGPRO** 06 Ε Ρ TRIP OUT WITH TRICONE, NO PROBLEMS 2:30 - 3:00 0.50 **CSGPRO** В Р 14 PULL WEARBUSHING 3:00 - 9:30 6.50 **CSGPRO** 12 С Р RUN 4.5 I-80 11.6# CSG ,88 LTC & 113 DQX,CROSSOVER AND MVL MARKER TO 8751SHOE DEPTH,FLOAT COLLAR@ 8706 9:30 - 11:00 1.50 **CSGPRO** 05 D Р CIRCULATE BOTTOMS UP FOR CEMENT, 10' FLARE 20 MINUTES 11:00 - 16:00 5.00 **CSGPRO** 12 Ε Р HELD SAFETY MEETING WITH RIG & CEMENTING CREWS, TEST LINES TO 5000, DROP TOP PLUG, PUMP 25 BBLS WATER SPACER, LEAD 10% EXCESS, 490 SACKS 12.5 PPG 1.98 YLD, TAIL 0% EXCESS 1085 SACKS 1.32 YLD, SHUT DOWN CLEAN LINES, DROP BOTTOM PLUG & DISPLACE WITH 135 BBLS CLAYCARE WATER, BUMP PLUG @3200 PSI, 500 OVER FINAL LIFT OF 2650 PSI, FLOAT HELD, FULL RETURNS THOUGH OUT JOB WITH 10 BBLS CEMENT TO CATCH TANK, 1.75 BACK TO TRUCK, EST TOP OF TAIL 3700', LEAD 0', R/D. FLUSH LINES & STACK 16:00 - 16:30 0.50 **RDMO** Е Ρ SET PACK OFF WITH CAMERON

API We	<del>ll Number</del>	4304	<del>752907</del>			KIES R	EGION	
				Opera	tion S	Summa	ry Report	
Well: NBU 1022-	-3G1CS GREEN						Spud Date: 2/4/	2013
Project: UTAH-U	IINTAH		Site: NBU	1022-03	G PAD			Rig Name No: PROPETRO 12/12, PIONEER 54/54
Event: DRILLING	3		Start Date	e: 1/16/20	13			End Date: 3/18/2013
Active Datum: RI	KB @5,001.00usft (ab	ove Mean S	ea	UWI: S\	V/NE/0/1	0/S/22/E/	3/0/0/26/PM/N/21	53/E/0/2105/0/0
Date	Time	Duration	Phase	Code	Sub	P/U	MD From	Operation
	Start-End	(hr)			Code		(usft)	
	16:30 - 18:00	1.50	RDMO	01	Е			SAVE MUD TO STORAGE & MOVE DRILL WATER
								TO MUD TANKS, PREP FOR SKID, AND RIG
								RELEASE TO LAST WELL ON PAD@18:00
								3/18/2013

## General

## Customer Information <del>[</del>:

Company	US ROCKIES REGION
Representative	
Address	

## Well/Wellbore Information 1.2

				P
				API
			US ROCKIES REGION	We:
				11
General				Nun
Customer Information				ber:
Company	US ROCKIES REGION			4
Representative				30
Address				)4
Well/Wellbore Information	tion			75290
Well	NBU 1022-3G1CS GREEN	Wellbore No.	НО	)7(
Well Name	NBU 1022-3G1CS	Wellbore Name	NBU 1022-3G1CS	00
Report No.	1	Report Date	4/22/2013	00
Project	UTAH-UINTAH	Site	NBU 1022-03G PAD	)
Rig Name/No.		Event	COMPLETION	
Start Date	4/18/2013	End Date	5/7/2013	
Spud Date	2/4/2013	Active Datum	RKB @5,001.00usft (above Mean Sea Level)	
UWI	SW/NE/0/10/S/22/E/3/0/0/26/PM/N/2153/E/0/2105/0/0			

### General ..

Contractor	Job Method	Supervisor	
Perforated Assembly	Conveyed Method		

Summary

1.5

## Initial Conditions 1.4

Fluid Type		Fluid Density	Gross Interval	5,574.0 (usft)-8,681.0 (usft   Start Date/Time	Start Date/Time	4/22/2013 12:00AM
Surface Press		Estimate Res Press	No. of Intervals	51	51 End Date/Time	4/22/2013 12:00AM
TVD Fluid Top		Fluid Head	Total Shots	191	191 Net Perforation Interval	63.00 (usft)
Hydrostatic Press		Press Difference	Avg Shot Density	3.03 (shot/ft)	3.03 (shot/ft) Final Surface Pressure	
Balance Cond	NEUTRAL				Final Press Date	

# Intervals

## Perforated Interval 2.1

May 23, 2013 at 10:42 am

Date	Formation/	©TOC	CCL-T	MD Top	MD Base	Shot	Misfires/	Diamete	Diamete   Carr Type /Stage No	Carr	Phasing	Phasing   Charge Desc / Charge	Charge	Reason	Misru
	Reservoir	(JJSN)	ဟ	(nstt)	(usft) S (usft)	Density	Add. Shot	_		Size	•	Manufacturer	Weight		
			(nsft)			(shot/ft)		(in)		(in)			(gram)		
4/22/2013	/22/2013 WASATCH/			5.574.0	5.574.0 5.576.0	3.00		0.360 EXP/	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO	
12:00AM														7	

OpenWells

Perforated Interval (Continued) 2.1

												٦	US ROCKIES REGION	REGION IGE
2.1 Pe	Perforated Interval (Continued)	Continu	ed)											ll Nu
Date	Formation/ Reservoir	(Jysn) (mstg)	CCL-T S (usft)	MD Top (usft)	MD Base (usff)	Shot Misfires/ Density Add. Shot (shot/ft)	Diamete C r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/22/2013 12:00AM	WASATCH/			5,688.0	5,690.0		0.360 EXP/	/c	3.375	120.00		23.00	23.00 PRODUCTIO N	: 4
4/22/2013 12:00AM	WASATCH/			5,750.0	5,752.0	3.00	0.360 EXP/	/c	3.375	120.00		23.00	23.00 PRODUCTIO N	304
4/22/2013 12:00AM	WASATCH/			6,020.0	6,021.0	3.00	0.360 EXP/	la	3.375	120.00		23.00	23.00 PRODUCTIO N	175
4/22/2013 12:00AM	WASATCH/			6,042.0	6,043.0	3.00	0.360 EXP/	/0	3.375	120.00		23.00	23.00 PRODUCTIO N	290
4/22/2013 12:00AM	WASATCH/			6,062.0	6,064.0	3.00	0.360 EXP/	<b>)</b>	3.375	120.00		23.00	23.00 PRODUCTIO N	700
4/22/2013 12:00AM	WASATCH/			0.960,9	6,098.0	3.00	0.360 EXP/	)n	3.375	120.00		23.00	23.00 PRODUCTIO N	00
m	WASATCH/			6,502.0	6,504.0	3.00	0.360 EXP/	/0	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	WASATCH/			6,574.0	6,576.0	3.00	0.360 EXP/	<i>\</i> 0	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	WASATCH/			6,586.0	6,588.0	3.00	0.360 EXP/	<i>(</i> 0	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			6,988.0	6,991.0	3.00	0.360 EXP/	, ,	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,003.0	7,006.0	3.00	0.360 EXP/	/c	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,215.0	7,216.0	3.00	0.360 EXP/	/0	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,254.0	7,255.0	3.00	0.360 EXP/	/c	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,278.0	7,279.0	3.00	0.360 EXP/	/c	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,298.0	7,299.0	3.00	0.360 EXP/	/c	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,353.0	7,354.0	3.00	0.360 EXP/	/α	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,387.0	7,388.0	3.00	0.360 EXP/	<i>/</i> c	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,582.0	7,583.0	3.00	0.360 EXP/	/6	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,615.0	7,616.0	3.00	0.360 EXP/	/c	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,687.0	7,688.0	3.00	0.360 EXP/	la	3.375	120.00		23.00	23.00 PRODUCTIO N	
4/22/2013 12:00AM	MESAVERDE/			7,715.0	7,716.0	3.00	0.360 EXP/	/6	3.375	120.00		23.00	23.00 PRODUCTIO	

May 23, 2013 at 10:42 am

OpenWells

OpenWells

Perforated Interval (Continued) 2.1

													<b>5</b>	US ROCKIES REGION		API We
2.1 Pe	Perforated Interval (Continued)	ontinue:	d)													ll Nu
Date	Formation/ Reservoir	(Jen)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing Charg	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun	ımber
4/22/2013 12:00AM	MESAVERDE/			7,729.0	7,730.0	3.00		<u>0</u>	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N		: 4
က	MESAVERDE/			7,751.0	7,752.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N	30-	1304
4/22/2013 12:00AM	MESAVERDE/			7,766.0	7,767.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N	1752	1752
m	MESAVERDE/			7,841.0	7,842.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N	290	290
4/22/2013 12:00AM	MESAVERDE/			7,908.0	7,909.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N	700	700
	MESAVERDE/			7,918.0	7,919.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N	00	00
m	MESAVERDE/			7,930.0	7,931.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N		
m	MESAVERDE/			7,945.0	7,946.0	3.00		0.360 EXP/	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			7,976.0	7,977.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N		
6	MESAVERDE/			8,006.0	8,007.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N		
6	MESAVERDE/			8,028.0	8,029.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			8,046.0	8,047.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			8,066.0	8,067.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			8,104.0	8,105.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			8,140.0	8,141.0	3.00		0.360 E	EXP/	3.375	120.00		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			8,169.0	8,170.0	2.00		0.360 E	EXP/	3.375	180.00		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			8,175.0	8,176.0	2.00		0.360 E	EXP/	3.375	180.00		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			8,228.0	8,229.0	4.00		0.360 E	EXP/	3.375	90.00		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			8,279.0	8,280.0	4.00		0.360 E	EXP/	3.375	90.06		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			8,334.0	8,335.0	4.00		0.360 EXP/	EXP/	3.375	00:06		23.00 F	23.00 PRODUCTIO N		
4/22/2013 12:00AM	MESAVERDE/			8,417.0	8,418.0	4.00		0.360 EXP/	EXP/	3.375	00.06		23.00 F	23.00 PRODUCTIO N		

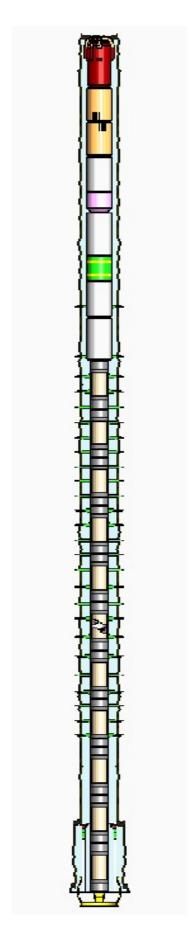
May 23, 2013 at 10:42 am

Perforated Interval (Continued) 2.1

	Nu	mber	: 4	304	1752	290	700	00		
REGION		Misrun								
US ROCKIES REGION		Reason	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO
		Charge Weight (gram)	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00
		Charge Desc /Charge Manufacturer								
		Phasing (°)	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
		Carr Size (in)	3.375	3.375	3.375	3.375	3.375	3.375	3.375	3.375
		Carr Type /Stage No	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/
		Diamete r (in)	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/
		Misfires/ Add. Shot								
		Shot Density (shot/ft)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
		MD Base (usft)	8,459.0	8,497.0	8,521.0	8,569.0	8,580.0	8,639.0	8,655.0	8,681.0
		CCL-T MD Top MD Base S (usft) (usft)	8,458.0	8,496.0	8,520.0	8,568.0	8,579.0	8,638.0	8,654.0	8,680.0
5										
		(JJSN)								
Dorforation Internal (Continued)	erioraleo interval	Formation/ Reservoir	4/22/2013  MESAVERDE/ 12:00AM	MESAVERDE/						
	Z. 1	Date	4/22/2013 12:00AM	4/22/2013 12:00AM	4/22/2013 12:00AM	4/22/2013 12:00AM	4/22/2013 12:00AM	4/22/2013 12:00AM	4/22/2013 12:00AM	4/22/2013 12:00AM

### Plots

## Wellbore Schematic 3.1



				U	S ROCI	KIES R	EGION	
				Opera	ition S	umma	ary Report	
Well: NBU 1022-	-3G1CS GREEN						Spud Date: 2/4	/2013
Project: UTAH-U	JINTAH		Site: NBL	J 1022-03	G PAD		<u>'</u>	Rig Name No: SWABBCO 6/6
Event: COMPLE	TION		Start Date	a· 4/18/2∩	113			End Date: 5/7/2013
	KB @5,001.00usft (a	bove Mean S		1		L 0/S/22/E/	3/0/0/26/PM/N/21	
Level)	<b>3</b> 1,11 1111(1							
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/28/2013	-							
4/18/2013	8:00 - 9:00	1.00	SUBSPR	33	С	Р		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES  1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST 50 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.  PRESSURE TEST 8 5/8 X 4 1/2 TO 650 PSI HELD FOR 5 MIN LOST -608 PSI,BLED PSI OFF, REINSTALLED POP OFF SWIFN  NOTE PRESSURED TO 650 3 TIMES COULDNT PUMP INTO SURFACE
4/19/2013	7:00 - 11:00	4.00	SUBSPR	37		Р		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWIFW
4/23/2013	6:45 - 7:00	0.25	FRAC	48		Р		SLIPS, TRIPS, FALLS.
	7:00 - 17:00	10.00	FRAC	36	В	P		REFER TO STIMULATION PJR FOR FLUID, SAND AND CHEMICAL VOLUMES, ALL STAGES WERE PERFORATED ACCORDING TO PERF RECORD IN OPEN WELLS, ALL STAGES WERE STIMULATED TO VENDOR POST JOB REPORT. ALL PLUGS ARE HALIBURTON 8K CBPS  FRAC STG #1] WHP=1,672#, BRK DN PERFS=3,747#, @=5.3 BPM, INTIAL ISIP=2,557#, FG=.74, FINAL ISIP=2,753#, FG=.76,  SET PLUG & PERFORATE STG #2  FRAC STG #2] WHP=1,410#, BRK DN PERFS=3,318#, @=4 BPM, INTIAL ISIP=1,821#, FG=.66, FINAL ISIP=2,694#, FG=.76,  SET PLUG & PERFORATE STG #3  FRAC STG #3] WHP=1,687#, BRK DN PERFS=2,602#, @=5 BPM, INTIAL ISIP=1,825#, FG=.66, FINAL ISIP=2,829#, FG=.79,  SET PLUG & PERFORATE STG #4 SWIFN
4/24/2013	6:30 - 6:45	0.25	FRAC	48		Р		HSM, WORKING W/ OR AROUND CHEMICALS
	6:45 - 7:00	0.25	FRAC	46	E	Z		BROKE DOWN DID NOT FRAC WELL
4/25/2013	5:45 - 6:00	0.25	FRAC	48		Р		HSM, SPILL PREVENTION

				U	S ROC	KIES RE	EGION	
				Opera	tion S	umma	ry Report	
Well: NBU 1022	-3G1CS GREEN						Spud Date: 2/4	4/2013
Project: UTAH-L	JINTAH		Site: NBU	1022-03	G PAD			Rig Name No: SWABBCO 6/6
Event: COMPLE	ETION		Start Date	e: 4/18/20	113			End Date: 5/7/2013
Active Datum: R	RKB @5,001.00usft	(above Mean Se	ea	UWI: SV	V/NE/0/1	0/S/22/E/3	3/0/0/26/PM/N/2	153/E/0/2105/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 18:00	12.00	FRAC	36	B	Р	(usit)	FRAC STG #4] WHP=1,970#, BRK DN PERFS=2,974#, @=7 BPM, INTIAL ISIP=2,513#, FG=.76, FINAL ISIP=2,793#, FG=.79,
								SET PLUG PERFORATE STG #5
								FRAC STG #5] WHP=1,538#, BRK DN PERFS=5,237#, @=4.7 BPM, INTIAL ISIP=2,029#, FG=.70, FINAL ISIP=2,123#, FG=.72,
								SET PLUG AND PERFORATE STG #6
								FRAC STG #6] WHP=1,230#, BRK DN PERFS=4,264#, @=4.6 BPM, INTIAL ISIP=2,751#, FG=.82, FINAL ISIP=2,468#, FG=.78,
								SET PLUG AND PERFORATE STG #7 SWIFN.
4/26/2013	6:15 - 6:30	0.25	FRAC	48		Р		HSM, OVERHEAD LOADS
	6:30 - 17:00	10.50	FRAC	36	В	Р		FRAC STG #7] WHP=631#, BRK DN PERFS=1,964#, @=3.6 BPM, INTIAL ISIP=1,229#, FG=.61, FINAL ISIP=2,188#, FG=.75,
								SET PLUUG AND PERFORATE STG #8
								FRAC STG #8] WHP=200#, BRK DN PERFS=2,117#, @=4.9 BPM, INTIAL ISIP=746#, FG=.55, FINAL ISIP=1,974#, FG=.74,
								SET PLUG AND PERFORATE STG #9
								FRAC STG #9] WHP=462#, BRK DN PERFS=2,542#, @=4.8 BPM, INTIAL ISIP=1,223#, FG=.64, FINAL ISIP=1,788#, FG=.73,
								SET PLUG AND PERFORATE STG #10
								FRAC STG #10] WHP=140#, BRK DN PERFS=1,385#, @=4 BPM, INTIAL ISIP=352#, FG=.50, FINAL ISIP=1,460#, FG=.69,
								SET TOP KILL
								TOTAL BBLS=9,805 TOTAL SAND=215,935#
5/6/2013	7:00 - 7:15	0.25	DRLOUT	48		Р		JSA-SAFETY MEETING
	7:15 - 9:00	1.75	DRLOUT	30	Α	Р		MIRU, N/D WH, N/U BOPS,
	9:00 - 15:00	6.00	DRLOUT	31	I	Р		P/U 3 7/8" BIT AND POBS, RIH W/ 2 3/8" TBG, TAG CBP @ 5524', PREPARE TO DRILL OUT IN AM,
5/7/2013	-							RUN PRODUCTION TUBING, TUBING/CASING SIZE 2,375.000 in, MD TOP 19.0 usft to MD LANDED 8,145.9 usft
	7:00 - 7:15	0.25	DRLOUT	48		Р		JSA-SAFETY MEETING

API We	ll Number	4304	752907			KIES RI	EGION	
				Opera	tion S	umma	ry Report	
Well: NBU 1022-	3G1CS GREEN						Spud Date: 2/4/	/2013
Project: UTAH-U			Site: NBL	J 1022-03	G PAD		<u> </u>	Rig Name No: SWABBCO 6/6
Event: COMPLE	TION		Start Dat	e: 4/18/20	113			End Date: 5/7/2013
Active Datum: Rh	KB @5,001.00usft (ab	oove Mean Se	-			0/S/22/E/	3/0/0/26/PM/N/21	53/E/0/2105/0/0
Date	Time	Duration	Phase	Code	Sub	P/U	MD From	Operation
	7:15 - 14:00	(hr) 6.75	DRLOUT	44	Code C	P	(usft)	PRESSURE TEST CSG AND BOPS,
								ESTB. CIRC DN TBG OUT CSG, DRILL OUT CBPS,  ( CBP #1 ) 5524', DRILL OUT HALLIBURTON 8K CBP IN 7 MIN, 25 # DIFF, RIH TAG SAND @ 5770', C/O 12' SAND, FCP = 0 #.
								( CBP #2 ) 5782', DRILL OUT HALLIBURTON 8K CBP IN 6 MIN, 75 # DIFF, RIH TAG SAND @ 6108 ', C/O 20 ' SAND, FCP = 25 #.
								( CBP #3 ) 6128', DRILL OUT HALLIBURTON 8K CBP IN 9 MIN, 25 # DIFF, RIH TAG SAND @ 6590 ', C/O 28 ' SAND, FCP = 50 #.
								(CBP #4) 6618', DRILL OUT HALLIBURTON 8K CBP IN 10 MIN, 50 # DIFF, RIH TAG SAND @ 7000', C/O 36' SAND, FCP = 75 #.
								( CBP #5 ) 7036', DRILL OUT HALLIBURTON 8K CBP IN 6 MIN, 50 # DIFF, RIH TAG SAND @ 7388 ', C/O 30 ' SAND, FCP = 100 #.
								(CBP #6) 7418', DRILL OUT HALLIBURTON 8K CBP IN 8 MIN, 200 # DIFF, RIH TAG SAND @ 7967', C/O 30' SAND, FCP = 150 #.
								(CBP #7) 7797', DRILL OUT HALLIBURTON 8K CBP IN 5 MIN, 300 # DIFF, RIH TAG SAND @ 7966', C/O 30 'SAND, FCP = 250 #.
								( CBP #8 ) 7996', DRILL OUT HALLIBURTON 8K CBP IN 10 MIN, 300 # DIFF, RIH TAG SAND @ 8119 ', C/O 40 ' SAND, FCP = 300 #.
								( CBP #9 ) 8159', DRILL OUT HALLIBURTON 8K CBP IN 6 MIN, 100 # DIFF, RIH TAG SAND @ 8418 ', C/O 30 ' SAND, FCP = 400 #.
								( CBP #10 ) 8448', DRILL OUT HALLIBURTON 8K CBP IN 6 MIN, 100 # DIFF, RIH TAG SAND @ 8656 ', C/O 50 ' SAND TO 8706 ' PBTD, FCP = 450 #.
								P/O LAY DN 23 JTS ON TRAILER, LAND TBG IN WELL W/ 257 JTS 2 3/8" TBG, EOT @ 8145.90', N/D BOP'S, N/U WH, PRESSURE TEST FLOW LINE TO 3000#, PUMP BIT OFF @ #, TURN WELL OVER TO FLOW BACK CREW W/ 8835 BBLS WTR LEFT TO RECOVER, SITP = 2375 #, SICP = 2484 #,
								KB = 19.00' HANGER = .83' 107 JTS 2 3/8" L-80 TBG = 3380.04' 1= 2 3/8" L-80 PUP JT = 6.13'

API WE	ell Number	• 4304	752907			KIES R	EGION	
				Opera	ation S	Summa	ary Report	
Well: NBU 1022	2-3G1CS GREEN						Spud Date: 2/4/	/2013
Project: UTAH-l	JINTAH		Site: NBL	J 1022-03	3G PAD			Rig Name No: SWABBCO 6/6
Event: COMPLE	ETION		Start Date	e: 4/18/20	013			End Date: 5/7/2013
Active Datum: RKB @5,001.00usft (above Mean Sea UWI: SW/NE/0/10/S/22/E/3/0/0/26/PM/N/2153/E/0/2105/0/0 Level)								53/E/0/2105/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								150 JTS 2 3/8" J-55 TBG = 4737.70'
								XN-NIPPLE 1.875" POBS = 2.20'
								EOT = 8145.90'
								315 JTS 2 3/8" TBG DELV. ( TOTAL ) 165 JTS 2 3/8" L-80 TBG DELV
								150 JTS 2 3/8" J-55 TBG DELV
								58 JTS 2 3/8" L-80 TBG RETURNED
	14:00 - 14:00	0.00	DRLOUT	50				WELL TURNED TO SALES 5/7/2013

API Well Number: 4304752 Site: NBU 1022-03G PAD

Scientific Drilling

Well: NBU 1022-3G1CS

Wellbore: OH Design: OH



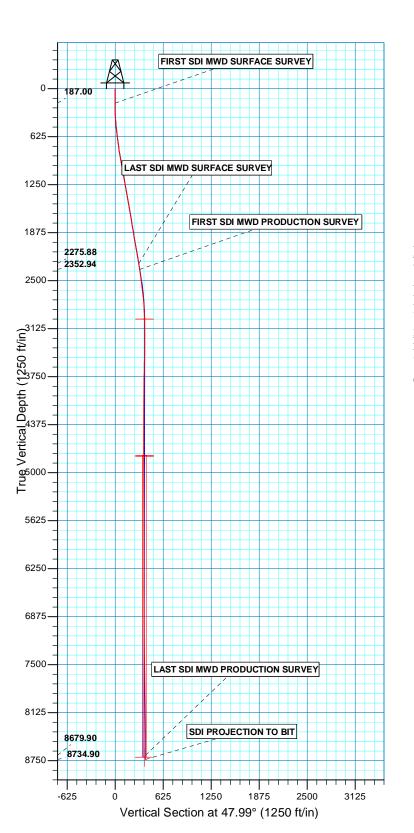


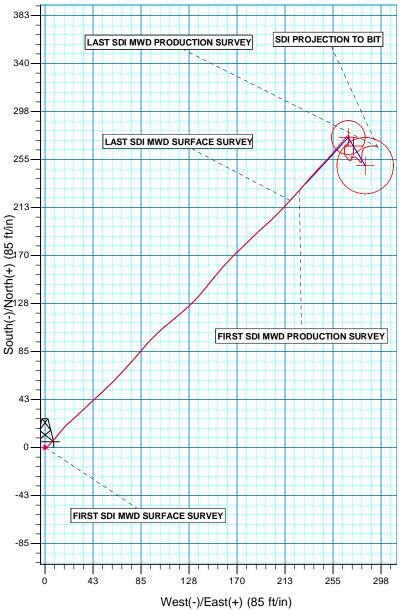


Azimuths to True North Magnetic North: 10.969

Magnetic Field Strength: 52263.4snT Dip Angle: 65.85° Date: 02/08/2012

Model: IGRF2010





PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)

Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 3 T10S R22E System Datum: Mean Sea Level

Design: OH (NBU 1022-3G1CS/OH)

RECEIVED: Jun. 03, 10:22, (halch)28 2013



### **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N NBU 1022-03G PAD NBU 1022-3G1CS

OH

Design: OH

### **Standard Survey Report**

28 March, 2013



API Well Number: 43047529070000



### **SDI** Survey Report



Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 1022-03G PAD

 Well:
 NBU 1022-3G1CS

Wellbore: OH
Design: OH

Geo Datum: Map Zone: Local Co-ordinate Reference:

**Survey Calculation Method:** 

TVD Reference: MD Reference:

North Reference:

Database:

Well NBU 1022-3G1CS

GL 4982 & KB 19 @ 5001.00ft (PIONEER 54) GL 4982 & KB 19 @ 5001.00ft (PIONEER 54)

True

Minimum Curvature

EDM 5000.1 Single User Db

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS) Zone 12N (114 W to 108 W) System Datum:

Mean Sea Level

Site NBU 1022-03G PAD, SECTION 3 T10S R22E

Northing: 14,522,425.14 usft Site Position: Latitude: 39.9793370 From: Lat/Long Easting: 2,082,091.08 usft Longitude: -109.4234300 **Position Uncertainty:** 0.00 ft Slot Radius: 13.200 in **Grid Convergence:** 1.01°

Well NBU 1022-3G1CS, 2153 FNL 2105 FEL **Well Position** +N/-S 0.00 ft Northing: 14,522,444.77 usft Latitude: 39.9793920 +E/-W 0.00 ft Easting: 2,082,068.31 usft Longitude: -109.4235100 0.00 ft ft 4,982.00 ft **Position Uncertainty** Wellhead Elevation: **Ground Level:** 

Wellbore	ОН				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/08/12	10.96	65.85	52,263

ОН Design Audit Notes: ACTUAL Version: 1.0 Phase: Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 47.99

Survey Program	Date 03/28/13		
From (ft)	To (ft) Survey (Wellbore)	Tool Name	Description
15.00 2,379.00	2,301.00 Survey #1 SDI MWD SURFACE (OH) 8,765.00 Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD SDI MWD	SDI MWD - Standard ver 1.0.1 SDI MWD - Standard ver 1.0.1

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
187.00	0.26	109.54	187.00	-0.13	0.37	0.19	0.15	0.15	0.00
FIRST SDI N	IWD SURFACE S	SURVEY							
270.00	0.97	68.31	269.99	0.07	1.20	0.93	0.96	0.86	-49.67
357.00	2.55	45.73	356.95	1.69	3.27	3.56	1.95	1.82	-25.95
447.00	4.40	40.80	446.78	5.70	6.96	8.99	2.08	2.06	-5.48
537.00	5.96	38.58	536.41	11.97	12.13	17.02	1.75	1.73	-2.47
627.00	7.47	45.55	625.79	19.72	19.22	27.48	1.90	1.68	7.74
717.00	7.65	47.48	715.01	27.86	27.81	39.31	0.35	0.20	2.14



### **SDI** Survey Report



Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 1022-03G PAD

 Well:
 NBU 1022-3G1CS

Wellbore: OH
Design: OH

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Database: Well NBU 1022-3G1CS

GL 4982 & KB 19 @ 5001.00ft (PIONEER 54) GL 4982 & KB 19 @ 5001.00ft (PIONEER 54)

True

Minimum Curvature

EDM 5000.1 Single User Db

Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
807.00	8.76	46.63	804.09	36.62	37.21	52.15	1.24	1.23	-0.94
897.00	9.98	47.94	892.89	46.55	47.98	66.80	1.38	1.36	1.46
987.00	10.82	45.46	981.41	57.70	59.79	83.04	1.06	0.93	-2.76
1,077.00	10.11	41.38	1,069.91	69.55	71.03	99.33	1.14	-0.79	-4.53
1,167.00	10.03	40.75	1,158.52	81.42	81.37	114.95	0.15	-0.09	-0.70
1,257.00	10.46	42.39	1,247.09	93.39	92.00	130.86	0.58	0.48	1.82
1,347.00	10.33	49.13	1,335.62	104.70	103.61	147.06	1.36	-0.14	7.49
1,437.00	9.58	50.74	1,424.26	114.72	115.51	162.60	0.89	-0.83	1.79
1,527.00	9.23	47.92	1,513.05	124.30	126.66	177.30	0.64	-0.39	-3.13
1,617.00	10.11	40.80	1,601.77	135.12	137.18	192.36	1.65	0.98	-7.91
1,707.00	10.02	38.52	1,690.39	147.22	147.22	207.92	0.45	-0.10	-2.53
1,797.00	9.50	40.19	1,779.09	159.02	156.89	223.00	0.66	-0.58	1.86
1,887.00	9.15	45.81	1,867.90	169.68	166.81	237.51	1.08	-0.39	6.24
1,977.00	9.50	46.58	1,956.71	179.78	177.34	252.09	0.41	0.39	0.86
2,067.00	10.02	45.90	2,045.41	190.33	188.36	267.34	0.59	0.58	-0.76
2,157.00	10.46	47.92	2,133.97	201.25	200.04	283.33	0.63	0.49	2.24
2,247.00	9.45	42.90	2,222.62	212.14	211.14	298.86	1.48	-1.12	-5.58
2,301.00	9.53	42.38	2,275.88	218.69	217.17	307.72	0.22	0.15	-0.96
LAST SDI M	WD SURFACE S	URVEY							
2,379.00	8.28	41.12	2,352.94	227.69	225.21	319.73	1.62	-1.60	-1.62
FIRST SDI M	IWD PRODUCTI	ON SURVEY							
2,474.00	7.91	40.18	2,446.99	237.84	233.93	332.99	0.41	-0.39	-0.99
2,569.00	7.58	44.30	2,541.13	247.32	242.52	345.72	0.68	-0.35	4.34
2,663.00	6.37	42.91	2,634.43	255.57	250.40	357.10	1.30	-1.29	-1.48
2,758.00	5.48	38.96	2,728.92	262.96	256.84	366.83	1.03	-0.94	-4.16
2,853.00	3.60	37.97	2,823.62	268.84	261.53	374.25	1.98	-1.98	-1.04
2,948.00	2.51	44.36	2,918.48	272.68	264.82	379.27	1.20	-1.15	6.73
3,043.00	1.51	40.66	3,013.42	275.12	267.09	382.58	1.06	-1.05	-3.89
3,138.00	0.48	104.25	3,108.41	275.97	268.29	384.05	1.44	-1.08	66.94
3,233.00	0.56	103.84	3,203.40	275.76	269.13	384.53	0.08	0.08	-0.43
3,329.00	0.17	149.74	3,299.40	275.52	269.66	384.76	0.48	-0.41	47.81
3,423.00	0.80	199.19	3,393.40	274.78	269.51	384.16	0.75	0.67	52.61
3,518.00	0.98	177.75	3,488.39	273.35	269.33	383.06	0.40	0.19	-22.57
3,613.00	1.34	189.42	3,583.37	271.44	269.18	381.67	0.45	0.38	12.28
3,708.00	1.01	205.09	3,678.35	269.58	268.64	380.03	0.48	-0.35	16.49
3,803.00	1.30	226.05	3,773.33	268.08	267.51	378.18	0.53	0.31	22.06
3,898.00	1.22	212.05	3,868.31	266.47	266.20	376.13	0.33	-0.08	-14.74
3,992.00	1.03	219.59	3,962.29	264.97	265.13	374.33	0.26	-0.20	8.02
4,087.00	0.46	83.18	4,057.28	264.36	264.96	373.80	1.47	-0.60	-143.59
4,182.00	0.24	181.25	4,152.28	264.21	265.33	373.98	0.58	-0.23	103.23
4,277.00	0.69	182.67	4,247.28	263.44	265.30	373.44	0.47	0.47	1.49
4,372.00	0.55	178.47	4,342.27	262.41	265.29	372.74	0.15	-0.15	-4.42



### SDI Survey Report



US ROCKIES REGION PLANNING Company: Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: NBU 1022-03G PAD Well: NBU 1022-3G1CS

Wellbore: ОН ОН Design:

Local Co-ordinate Reference:

Well NBU 1022-3G1CS GL 4982 & KB 19 @ 5001.00ft (PIONEER 54) TVD Reference:

MD Reference: GL 4982 & KB 19 @ 5001.00ft (PIONEER 54) North Reference:

Minimum Curvature **Survey Calculation Method:** 

EDM 5000.1 Single User Db Database:

Magazza			Vortical			Vortical	Doglass	Duild	Tues
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,561.00	0.77	180.70	4,531.26	260.09	265.38	371.25	0.07	0.02	4.78
4,656.00	0.53	160.56	4,626.25	259.04	265.51	370.65	0.35	-0.25	-21.20
4,751.00	0.66	138.94	4,721.25	258.21	266.02	370.47	0.27	0.14	-22.76
4,846.00	0.88	144.53	4,816.24	257.20	266.80	370.38	0.24	0.23	5.88
4,941.00	0.97	135.27	4,911.23	256.04	267.79	370.33	0.18	0.09	-9.75
5,036.00	1.04	145.88	5,006.21	254.75	268.84	370.25	0.21	0.07	11.17
5,131.00	0.64	77.76	5,101.20	254.15	269.84	370.59	1.05	-0.42	-71.71
5,226.00	0.62	85.26	5,196.20	254.30	270.87	371.46	0.09	-0.02	7.89
5,320.00	0.88	358.25	5,290.19	255.07	271.36	372.33	1.12	0.28	-92.56
5,415.00	0.74	2.21	5,385.18	256.41	271.36	373.23	0.16	-0.15	4.17
5,510.00	0.44	10.12	5,480.18	257.38	271.45	373.95	0.33	-0.32	8.33
5,605.00	0.17	19.81	5,575.18	257.87	271.56	374.36	0.29	-0.28	10.20
5,699.00	0.20	115.95	5,669.18	257.93	271.75	374.55	0.29	0.03	102.28
5,794.00	0.46	156.43	5,764.18	257.51	272.06	374.49	0.35	0.27	42.61
5,889.00	0.70	165.50	5,859.17	256.60	272.35	374.10	0.27	0.25	9.55
5,984.00	0.36	44.75	5,954.17	256.25	272.71	374.13	0.99	-0.36	-127.11
6,079.00	0.38	48.94	6,049.17	256.67	273.16	374.74	0.04	0.02	4.41
6,174.00	0.35	66.63	6,144.16	256.99	273.66	375.33	0.12	-0.03	18.62
6,269.00	0.44	92.73	6,239.16	257.09	274.29	375.87	0.21	0.09	27.47
6,364.00	0.44	120.85	6,334.16	256.88	274.97	376.23	0.23	0.00	29.60
6,459.00	0.47	129.86	6,429.16	256.45	275.58	376.40	0.08	0.03	9.48
6,553.00	0.59	131.86	6,523.15	255.88	276.24	376.50	0.13	0.13	2.13
6,648.00	0.53	130.26	6,618.15	255.27	276.94	376.61	0.07	-0.06	-1.68
6,743.00	0.75	133.59	6,713.14	254.55	277.72	376.72	0.23	0.23	3.51
6,838.00	0.88	139.84	6,808.13	253.57	278.64	376.74	0.17	0.14	6.58
6,932.00	1.01	142.96	6,902.12	252.36	279.61	376.65	0.15	0.14	3.32
7,027.00	0.37	347.32	6,997.12	251.99	280.05	376.73	1.43	-0.67	-163.83
7,122.00	0.77	13.43	7,092.11	252.91	280.13	377.40	0.49	0.42	27.48
7,217.00	0.88	358.16	7,187.10	254.26	280.25	378.40	0.26	0.12	-16.07
7,312.00	0.77	20.37	7,282.09	255.58	280.45	379.43	0.35	-0.12	23.38
7,407.00	1.14	355.88	7,377.08	257.13	280.60	380.58	0.57	0.39	-25.78
7,502.00	1.39	3.19	7,472.05	259.22	280.60	381.98	0.31	0.26	7.69
7,596.00	1.02	10.54	7,566.03	261.18	280.82	383.45	0.43	-0.39	7.82
7,691.00	1.09	21.32	7,661.02	262.85	281.30	384.93	0.22	0.07	11.35
7,786.00	0.97	31.21	7,756.00	264.38	282.05	386.51	0.23	-0.13	10.41
7,881.00	0.78	59.77	7,850.99	265.40	283.02	387.91	0.49	-0.20	30.06
7,976.00	0.67	79.43	7,945.98	265.82	284.13	389.02	0.28	-0.12	20.69
8,070.00	0.88	72.85	8,039.98	266.14	285.36	390.14	0.24	0.22	-7.00
8,165.00	0.86	71.58	8,134.97	266.58	286.73	391.46	0.03	-0.02	-1.34
8,260.00	0.76	79.63	8,229.96	266.92	288.02	392.65	0.16	-0.11	8.47
8,355.00	0.78	93.21	8,324.95	266.99	289.29	393.64	0.19	0.02	14.29
8,450.00	0.88	97.30	8,419.94	266.86	290.66	394.57	0.12	0.11	4.31
8,545.00	1.14	94.00	8,514.92	266.71	292.33	395.70	0.28	0.27	-3.47

API Well Number: 43047529070000



### SDI Survey Report



US ROCKIES REGION PLANNING Company:

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: NBU 1022-03G PAD Well: NBU 1022-3G1CS

Wellbore: ОН Design: ОН

Local Co-ordinate Reference:

Well NBU 1022-3G1CS GL 4982 & KB 19 @ 5001.00ft (PIONEER 54) TVD Reference:

MD Reference: GL 4982 & KB 19 @ 5001.00ft (PIONEER 54)

North Reference:

Minimum Curvature **Survey Calculation Method:** EDM 5000.1 Single User Db Database:

vey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,710.0	0 0.53	158.30	8,679.90	266.08	294.66	397.02	1.08	-0.53	81.27
LAST SD	I MWD PRODUCTI	ON SURVEY							
8,765.0	00 0.53	158.30	8,734.90	265.61	294.85	396.84	0.00	0.00	0.00
SDI PRO	JECTION TO BIT								

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
DTGT_NBU 1022-3G10 - actual wellpath mi - Circle (radius 15.0	sses target cer		3,000.70 at 3030.30f	274.49 t MD (3000.73	268.57 TVD, 274.85	14,522,723.96 N, 266.86 E)	2,082,331.98	39.9801457	-109.4225515
TOC @ 4777.00 NBU 1 - actual wellpath mi: - Point			4,777.00 ft at 4806.71	266.86 ft MD (4776.9	273.15 6 TVD, 257.6	14,522,716.41 6 N, 266.46 E)	2,082,336.70	39.9801247	-109.4225352
TOC @ 4777.00 NBU 1 - actual wellpath mis - Point			4,792.00 ft at 4821.71	266.90 ft MD (4791.9	273.12 5 TVD, 257.4	14,522,716.46 9 N, 266.59 E)	2,082,336.67	39.9801248	-109.4225353
PBHL_NBU 1022-3G1C - actual wellpath mi: - Circle (radius 25.0	sses target cer		8,707.00 ft at 8710.00	249.49 Off MD (8679.9	283.57 0 TVD, 266.0	14,522,699.23 8 N, 294.66 E)	2,082,347.42	39.9800770	-109.4224980

Design Annotations				
Measur		Local C	Coordinates	
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
187	7.00 187.00	-0.13	0.37	FIRST SDI MWD SURFACE SURVEY
2,30	1.00 2,275.88	3 218.69	217.17	LAST SDI MWD SURFACE SURVEY
2,379	9.00 2,352.94	227.69	225.21	FIRST SDI MWD PRODUCTION SURVEY
8,710	0.00 8,679.90	266.08	294.66	LAST SDI MWD PRODUCTION SURVEY
8,769	5.00 8,734.90	265.61	294.85	SDI PROJECTION TO BIT

Checked By:	Approved By:	Date: